

User Manual

VGA CUBE IP CAMERA





WARNINGS

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

DO NOT INSERT ANY METALLIC OBJECT THROUGH VENTILATION GRILLS.

CAUTION

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK. DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>		

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I. Preface

This IP Camera is a VGA Cube IP camera with the web server built in. User can view real-time video via IE browser. IP Camera supports simultaneously H.264, Motion JPEG & MPEG4 video compression and dual streaming which provides smooth and high video quality. The video can be stored in the SD card and played back remotely. With user friendly interface, it is an easy-to-use IP camera which is designed for security application.

II. Product Specifications

Main Features:

- VGA CMOS Sensor @ 30FPS
- Power over Ethernet available
- H.264/ JPEG / MPEG4 compression
- Micro SD card backup
- 2-way audio
- Support iPhone/ Android Phone
- Triple Streaming
- SDK for Software Integration
- Free Bundle 36 Channel Recording Software

HLC-84BV Specifications

Hardware	
CPU	ARM 9 ,32 bit RISC
RAM	128MB
Flash	16MB
Image sensor	1 / 4" VGA CMOS sensor
Sensitivity	1.0 lux @ 30fps
Lens Type	4.3mm @ F2.0
Audio	G.711/G.726(24Kbps/32kbps) audio compression Input : Mic built-in Output : 3.5mm phone jack, Support 2-way audio
IO	DI / DO
Power over Ethernet	Optional
Power	12V DC Power consumption Max : 2.4W
Operating Temperature	0°C~40°C

Dimensions	59mm x 93.7(mm)x 45.5(mm)
Weight	240g
Network	
Ethernet	10/ 100 Base-T
Network Protocol	HTTP, HTTPS, SNMP, QoS/DSCP, Access list, IEEE 802.1X, RTSP, TCP/IP, UDP, SMTP, FTP, PPPoE, DHCP, DDNS, NTP, UPnP, 3GPP, SAMB
Wireless (Optional)	
	Wireless 802.11 n/b/g
	Security WEP,WPA-PSK,WPA2-PSK
System	
Video Resolution	640x480@30fps, 320x240@30fps, 176x144@30fps
Triple Streaming	Yes
CMOS setting	Brightness, Contrast, Saturation, Exposure, Sharpness, AGC, BLC, Night Mode, Flip, Mirror, Outdoor/Indoor
Image snapshot	Yes
Full screen monitoring	Yes
Zoom	Yes
Privacy Mask	Yes, 3 different areas
Compression format	H.264/ M-JPEG/ MPEG4
Video bitrates adjust	CBR, VBR
Motion Detection	Yes, 3 different areas
Triggered action	Mail, FTP, Save to SD card, DO, Samba
Pre/ Post alarm	Yes, configurable
Security	Password protection, IP address filtering, HTTPS encrypted data transmission, 802.1X port-based authentication for network protection, QoS/DSCP
Firmware upgrade	HTTP mode, can be upgraded remotely
Simultaneous connection	Up to 10
SD card management	
Recording trigger	Motion Detection, IP check, Network break down (wire only),schedule, DI
Video format	AVI, JPEG
Video playback	Yes
Delete files	Yes
Web browsing requirement	
OS	Windows 7, 2000, XP, 2003, Microsoft IE 6.0 or above, Chrome, Safari, Firefox
Mobile Support	iOS 4.3 or above, Android 1.6 or above.

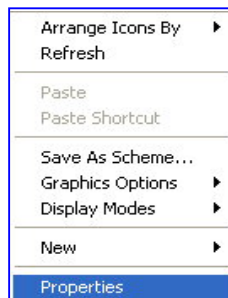
Hardware Suggested	Intel Dual Core 2.53G, RAM: 1024MB, Graphic card: 128MB
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*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.

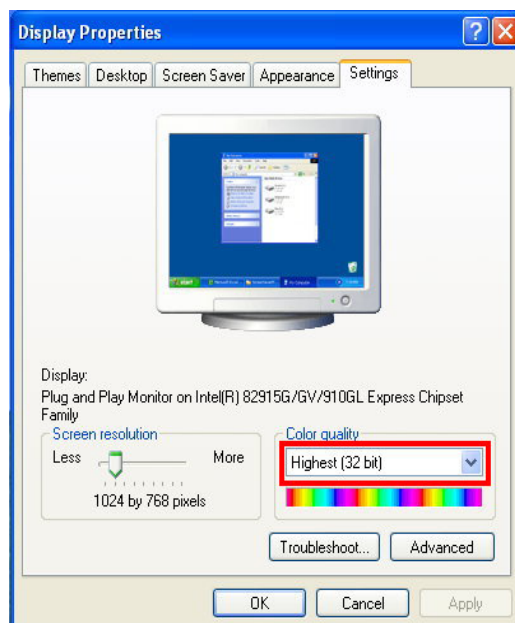
III. Product Installation

A. Monitor Setting

1. Right-Click on the desktop. Select “ Properties”



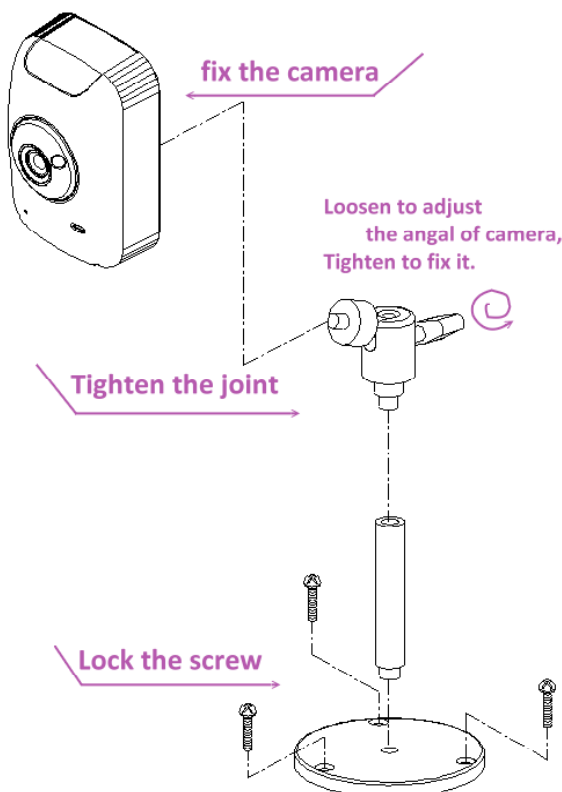
2. Change color quality to highest (32bit).



B. Hardware Installation

1. Camera Construction

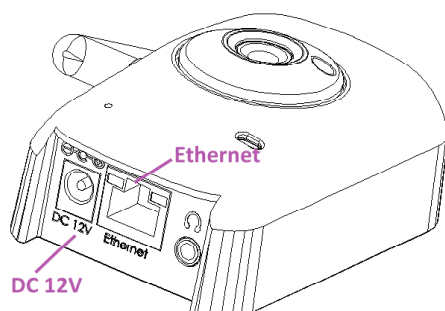
Please refer to the picture for camera installation. Use the screws to lock the bracket to the wall or ceiling, and then connect the camera to the bracket. There's a knob on the back of the bracket. Loosen the knob and you can adjust the angle of camera. Tighten it to fix the angle.



2. Connect power adaptor.

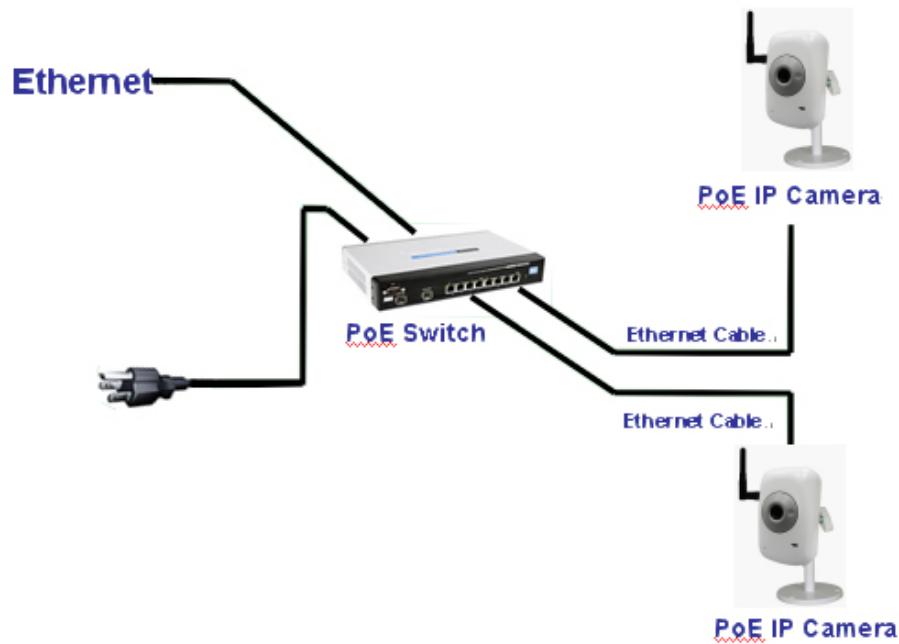
Connect IP Cam to PC or network with Ethernet cable.

Set up the network configurations according to the network environment. For further explanation, please refer to chapter VI, "[Network Configuration for IP CAMERA](#)".



3. PoE (Power Over Ethernet)(Optional) **802.3at, 30.0W PoE Switch is recommended**

Power over Ethernet (PoE) is a technology that integrates power into a standard LAN infrastructure. It enables power to be provided to the network device, such as an IP phone or a network camera, using the same cable as that used for network connection. It eliminates the need for power outlets at the camera locations and enables easier application of uninterruptible power supplies (UPS) to ensure 24 hours a day, 7 days a week operation.

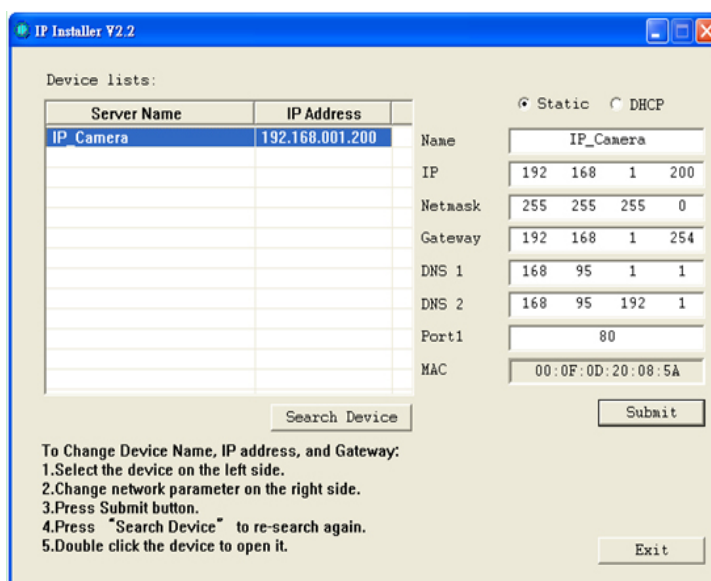


C. IP Assignment

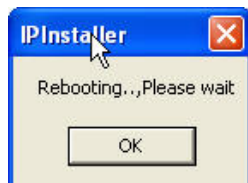
1. You can use the software "IP Installer" to assign the IP address of IP Camera. The software is in the attached CD.
2. There are two language versions of IP installer. Choose one as your need:
IPInstallerCht.exe: Chinese version
IPInstallerEng.exe: English version
3. There are 3 kinds of IP configuration.
 - a. Fixed IP (Public IP or Virtual IP)
 - b. DHCP (Dynamic IP)
 - c. Dial-up (PPPoE)
4. Execute IP Installer
5. For Windows XP SP2 user, the following message box may pop up. Please click "Unblock".



6. IP Installer configuration:



7. IP Installer will search for all IP Cameras connected on Lan. Click “Search Device” to refresh the result list.
8. Click one of the IP Camera listed on the left side. The network configuration of this IP camera shows on the right side. You may change the “name” of the IP Camera as your preference (eg: Office, warehouse). Change the parameter and click “Submit” . It will apply the change and reboot the Device.



9. Please make sure that the IP address of your PC and IP Camera are on the same subnet.

The same Subnet:

IP CAM IP address: 192.168.1.200

PC IP address: 192.168.1.100

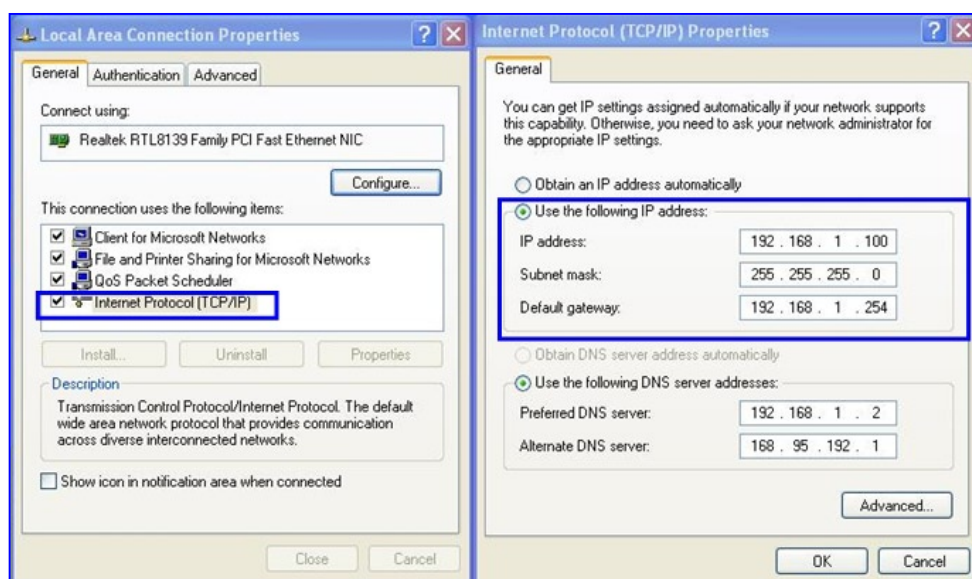
Different Subnets:

IP CAM IP address: 192.168.2.200

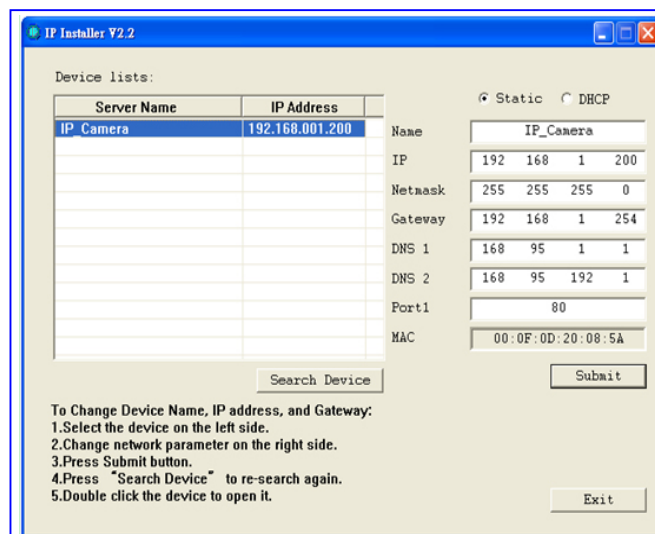
PC IP address: 192.168.1.100

To Change PC IP address:

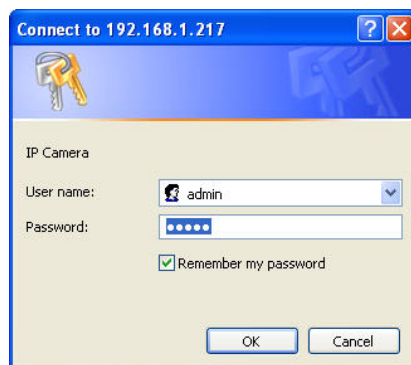
Control Panel→Network Connections→ Local Area Connection Properties→ Internet Protocol (TCP/IP) → Properties



10. A quick way to access remote monitoring is to double-click the selected IP Camera listed on “Device list” of IP Installer. An IE browser will be opened.



11. If you link to the IP Camera successfully, there pops a box asking you to log in. Please key in the default user name "admin" and password "admin" when you link to the IP Camera for the first time. You can revise the user name and password later. Please refer to Chapter V: "A.2. [User Management](#)".

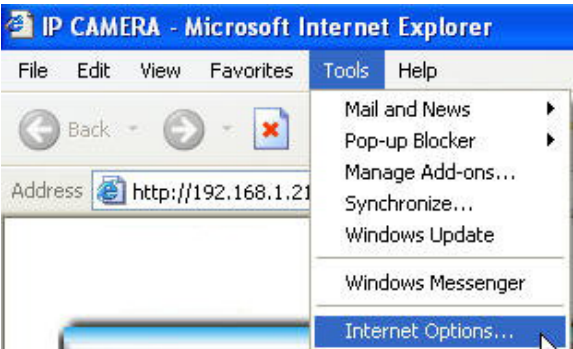
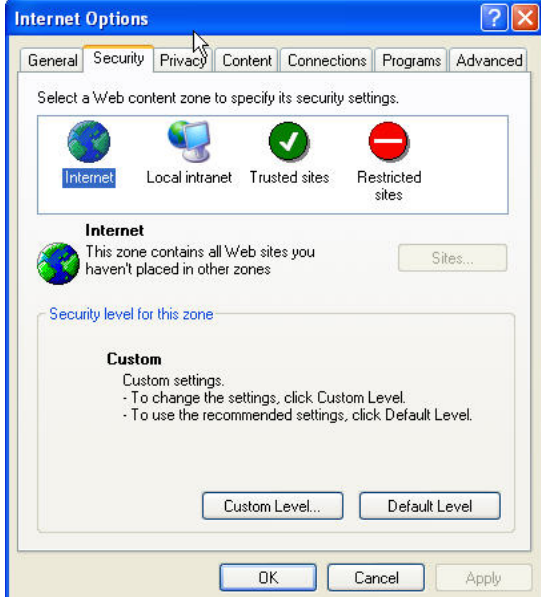
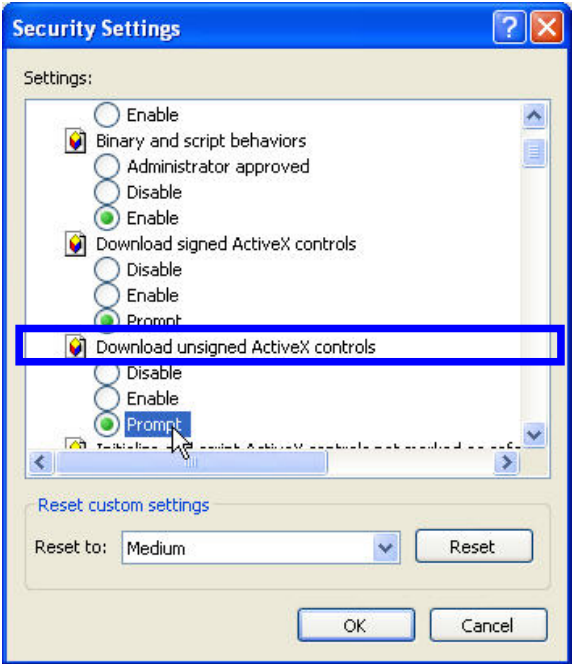
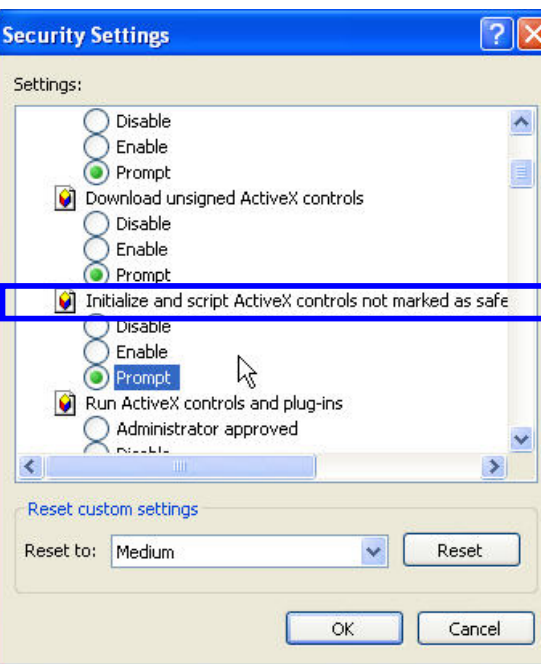
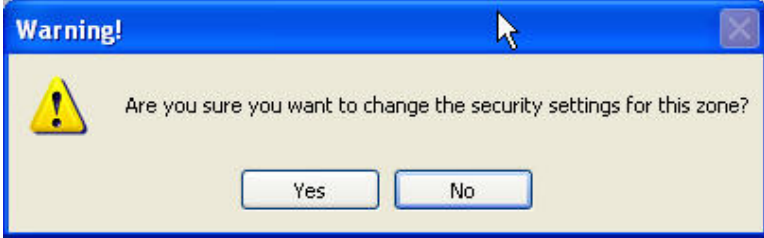


D. Install ActiveX control

For the first time to view the camera video via IE, it will ask you to install the ActiveX component.

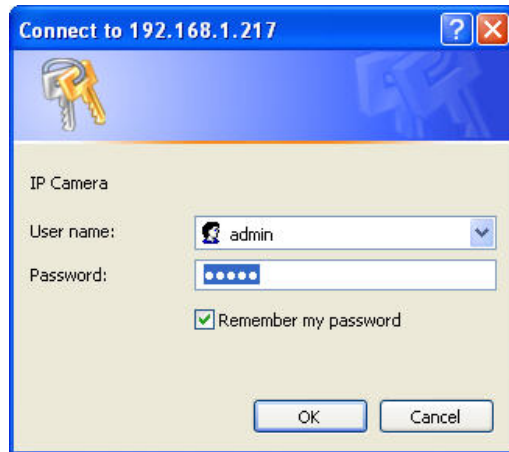
If the installation failed, please check the security setting for the IE browser.

1. IE → Tools → Internet Options... → Security Tab → Custom Level... → Security Settings → Download unsigned ActiveX controls → Select "Enable" or Prompt.
2. IE → Tools → Internet Options... → Security Tab → Custom Level... → Initialize and script ActiveX controls not marked as safe → Select "Enable" or Prompt.

<p style="text-align: center;">1</p> 	<p style="text-align: center;">2</p> 
<p style="text-align: center;">3</p> 	<p style="text-align: center;">4</p> 
<p style="text-align: center;">5</p> <p style="text-align: center;">When popup the following dialogue box, click "Yes".</p> 	



IV. Live Video

Start an IE browser, type the IP address of the IP camera in the address field. It will show the following dialogue box. Key-in the user name and password. The default user name and password are “admin” and “admin”.



When the IP Camera is connected successfully, it shows the following program interface.



1.  : Get into the administration page
2.  : Video Snapshot
3. Show system time, video resolution, and video refreshing rate
4. Adjust image, 1/2x, 1x, 2x
5. Select video streaming source (If in "Video Setting" the streaming 2 setting is closed, this option will not appear here.)
6. IP Camera supports 2-way audio. Click the "Chatting" check box, then you can use microphone connected to the PC to talk to the Camera side.
7. Show how many people connect to this IP camera.
8. Tick the Relay out "ON" box to trigger the relay output for testing. Tick "Off" to stop triggering.
9. Select Outdoor / Indoor according to the camera location.

Double-click the video to switch to full screen view. Press "Esc" or double-click the video again back to normal mode.

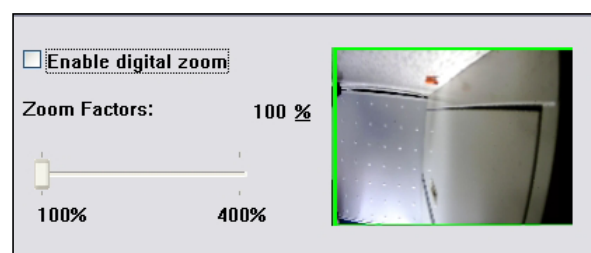


Right-Click the mouse on the video,
it will show a pop-up menu.


1. Snapshot: Save a JPEG picture
2. Record Start: Record the video in the local PC. It will ask you where to save the video. To stop recording, right-click the mouse again. Select "Record Stop". The video format is AVI. Use Microsoft Media Player to play the recorded file.
3. Mute: Turn off the audio. Click again to turn on it.
The "mute" button does not affect the playback recording video. As long as the "IP Camera to PC" option in the audio setting is enabled, all the audio will be recorded into the playback video even you click "mute" in the live page.
4. Full Screen: Full-screen mode.
5. ZOOM:


Enable zoom-in and zoom-out functions.

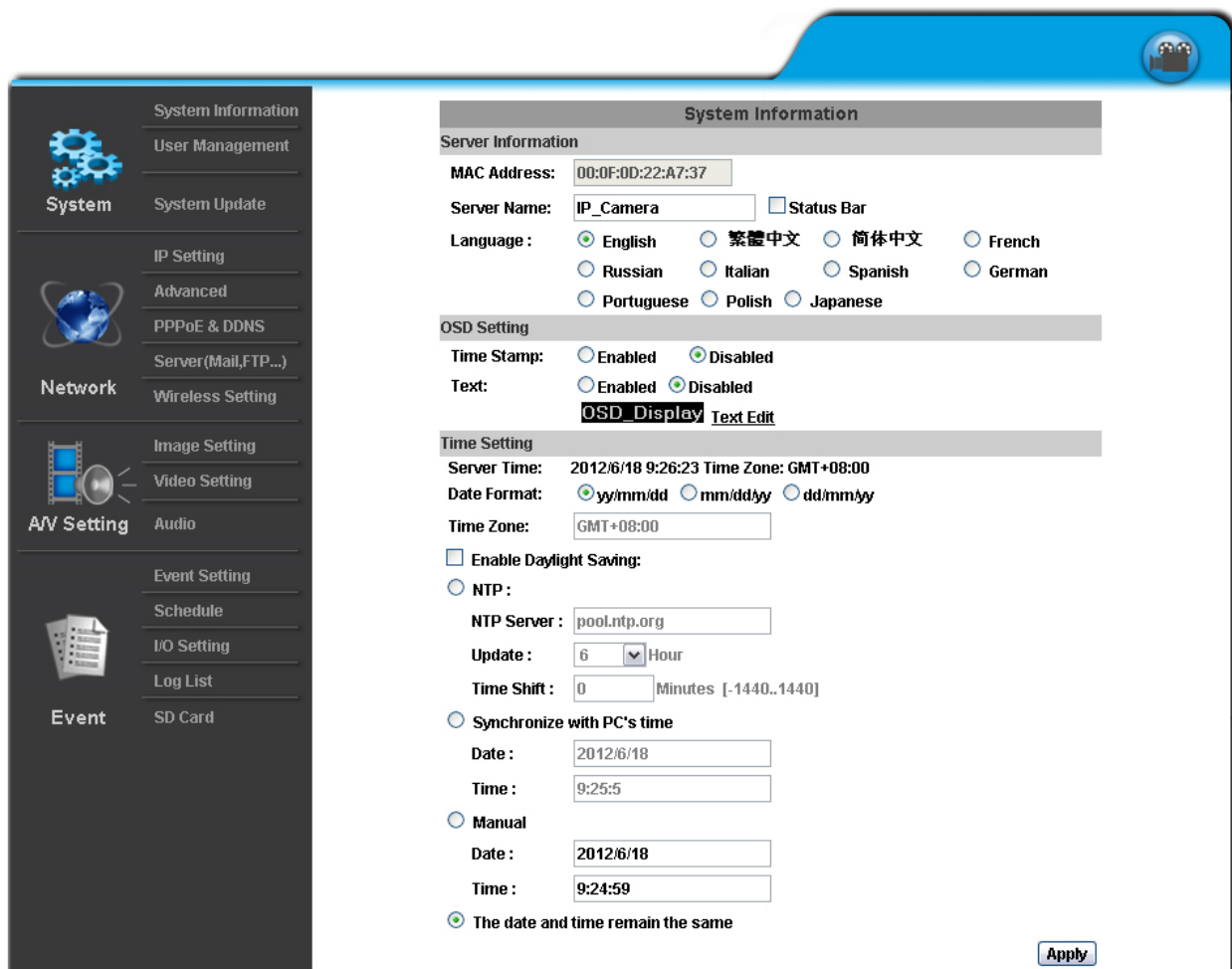
Select "Enable digital zoom" option first within the pop-up dialogue box and then drag and drop the bar to adjust the zoom factors.



V. IP Camera Configuration

Click  to get into the administration page as below.

Click  to back to the live video page.



The screenshot shows the IP Camera Configuration web interface. On the left is a sidebar menu with categories: System (containing System Information, User Management, System Update), Network (containing IP Setting, Advanced, PPPoE & DDNS, Server(Mail,FTP...), Wireless Setting), A/V Setting (containing Image Setting, Video Setting, Audio), and Event (containing Event Setting, Schedule, I/O Setting, Log List, SD Card). The main content area is titled 'System Information' and contains several sections: 'Server Information' with fields for MAC Address (00:0F:0D:22:A7:37), Server Name (IP_Camera), and Language (English selected); 'OSD Setting' with Time Stamp (Disabled selected) and Text (Disabled selected); 'Time Setting' with Server Time (2012/6/18 9:26:23), Date Format (yy/mm/dd selected), Time Zone (GMT+08:00), and options for Daylight Saving, NTP (pool.ntp.org), and Manual time setting. An 'Apply' button is at the bottom right.

A. System

1. System Information

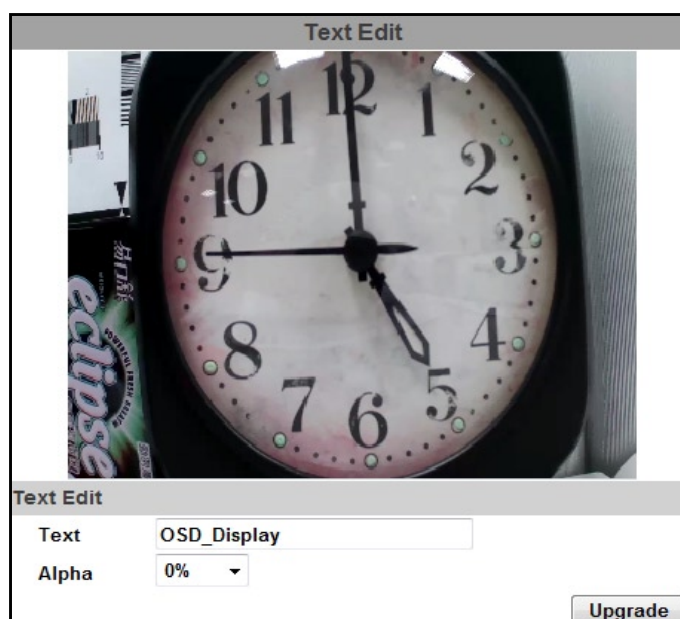
- a. Server Information: Set up the camera name, select language, and set up the camera time.
 - (i) Server Name: This is the Camera name. This name will show on the IP Installer.
 - (ii) Select language: There are 11 languages to choose from. When you change the language, it will show the following dialogue box for confirmation.



- b. OSD Setting: Select a position where date & time stamp / text showing on screen.



Moreover, click Text Edit can entry to adjust the OSD contents which is Alpha of text. Finally, click Upgrade button to reserve the setting.



- c. Server time setting: Select options to set up time - “NTP”, “Synchronize with PC’s time”, “Manual”, “The date and time remain the same”.

Note: To synchronize with the NTP Server, please set the IP camera up on the WAN instead of LAN.

Time Setting

Server Time: 2011/11/28 18:48:45 Time Zone: GMT+08:00

Date Format: ☒ yy/mm/dd ☐ mm/dd/yy ☐ dd/mm/yy

Time Zone:

☒ Enable Daylight Saving:

	Month	Week	Day of Week	Time
DST Start:	<input type="text" value="Mar"/>	<input type="text" value="2nd"/>	<input type="text" value="Sun"/>	<input type="text" value="12 am"/>
DST End:	<input type="text" value="Nov"/>	<input type="text" value="1st"/>	<input type="text" value="Sat"/>	<input type="text" value="12 am"/>

☐ NTP :

NTP Server :

Update : Hour

Time Shift : Minutes [-1440..1440]

☐ Synchronize with PC's time

Date :

Time :

☐ Manual

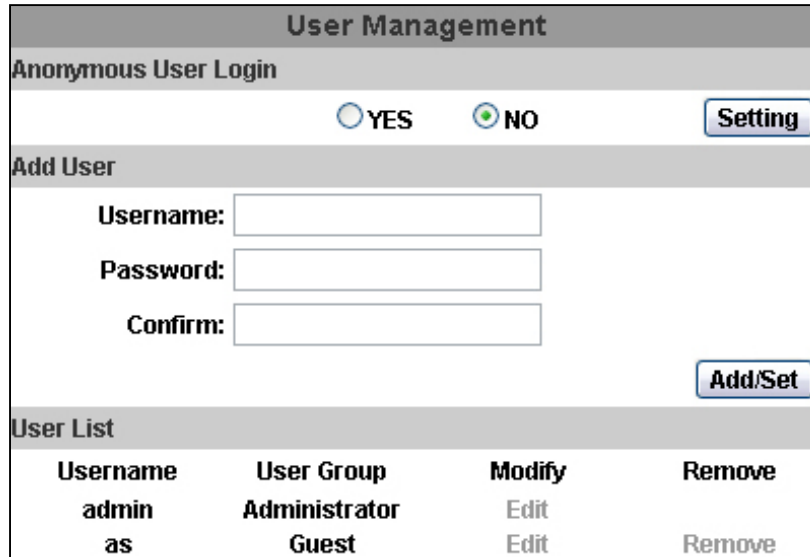
Date :

Time :

☒ The date and time remain the same

2. User Management

IP CAMERA supports three different users, administrator, general user, and anonymous user.



The **User Management** interface is divided into three main sections:

- Anonymous User Login:** Features two radio buttons, **YES** and **NO**, with the **NO** button selected. A **Setting** button is located to the right.
- Add User:** Contains three input fields labeled **Username:**, **Password:**, and **Confirm:**. An **Add/Set** button is positioned at the bottom right of this section.
- User List:** A table displaying the current user list.

Username	User Group	Modify	Remove
admin	Administrator	Edit	
as	Guest	Edit	Remove

a. Anonymous User Login:

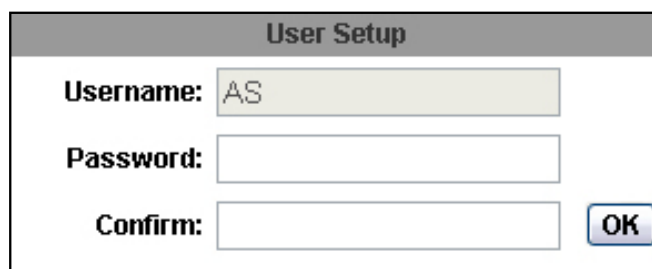
Yes: anonymous login is allowed

No: Username & password are required to access this IP camera

b. Add user:

Type the user name and password, then click “Add/Set”. The guest user can only browse the live video page and is not allowed to enter the configuration page.

c. Click “edit” or “delete” in the user list to modify them. The system will ask you to key in the password in the pop-up window before you edit the user information.



The **User Setup** interface is a pop-up window for editing user information. It contains three input fields: **Username:** (with the text 'AS' entered), **Password:**, and **Confirm:**. An **OK** button is located at the bottom right.

3. System update:

System Update	
Firmware Upgrade	
Firmware Version:	VB1.0.24
New Firmware:	<input type="button" value="選擇檔案"/> 未選擇檔案
<input type="button" value="Upgrade"/>	
Reboot System	
<input type="button" value="Start"/>	
Factory Default	
<input type="button" value="Start"/>	
Setting Management	
Save As a File:	Right click the mouse button on <u>Setting Download</u> and then select Save As to save current system's setting in the PC.
New Setting File:	<input type="button" value="選擇檔案"/> 未選擇檔案
<input type="button" value="Upgrade"/>	

- a. To update the firmware online, click “Browse...” to select the firmware. Then click “Upgrade” to proceed.

Note: The firmware upgrade might be accompanied by the changing of some setting and function, and the setting options might become different to the user manual that you're reading now.

- b. Reboot system: Re-start the IP camera
- c. Factory default: Delete all the settings in this IP camera.
- d. Setting Management: User may download the current setting to PC, or upgrade from previous saved setting.
- (i) Setting download:
Right-click the mouse button on Setting Download → Select “Save AS...” to save current IP CAM setting in PC → Select saving directory → Save
- (ii) Upgrade from previous setting:
Browse → search previous setting → open → upgrade → Setting update confirm → click [index.html](#) to return to main page

B. Network

1. IP Setting

a. IP Assignment

IP Setting	
IP Assignment	
<input type="radio"/> DHCP	
<input checked="" type="radio"/> Static	
IP Address:	<input type="text" value="192.168.40.150"/>
Subnet Mask:	<input type="text" value="255.255.255.0"/>
Gateway:	<input type="text" value="192.168.40.254"/>
DNS 0:	<input type="text" value="168.95.1.1"/>
DNS 1:	<input type="text" value="168.95.192.1"/>

IP Camera supports DHCP and static IP.

(i) DHCP: Using DHCP, IP CAMERA will get all the network parameters automatically.

(ii) Static IP: Please type in IP address, subnet mask, gateway, and DNS manually.

b. IPv6 Assignment

IPv6 Assignment	
<input checked="" type="checkbox"/> IPv6 Enabled:	
<input checked="" type="checkbox"/> Manually setup the IPv6 address:	
IPv6 Address/Prefix:	<input type="text" value="::"/> / <input type="text" value="64"/>
IPv6 Gateway:	<input type="text" value="::"/>
IPv6 DNS:	<input type="text" value="::"/>
DHCPv6:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
IPv6 Address: fe80::20f:dff:fe00:284d	

IPv6 is a newer numbering system that provides a much larger address pool than IPv4, which accounts for most of today's Internet traffic. You can set up IPv6 manually by key in Address, Gateway, and DNS, or enable DHCP to assign the IP automatically.

c. Port assignment

Port Assignment	
Web Page Port:	<input type="text" value="80"/>
HTTPS Port:	<input type="text" value="443"/>

HTTPS Setting

(i) Web Page Port: setup web page connecting port and video transmitting port (Default: 80)

(ii) HTTP Port: setup HTTPS connecting port (Default: 443)

d. UPnP (Universal Plug and play)

UPnP	
UPnP:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled
UPnP Port Forwarding:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
External Web Port:	<input type="text" value="80"/>
External HTTPS Port:	<input type="text" value="443"/>
External RTSP Port:	<input type="text" value="554"/>

This IP camera supports UPnP, If this service is enabled on your computer, the camera will automatically be detected and a new icon will be added to "My Network Places."

(i) UPnP Port Forwarding:

When the camera is installed under a router, Enable UPnP Port Forwarding to let the router open ports so that the video streams can be sent out from a LAN. Set Web Port, Http Port, and RTSP port, and make sure your router supports UPnP and the function has been activated.

(ii) Note: UPnP must be enabled on your computer. Please follow the procedure to activate UPnP.

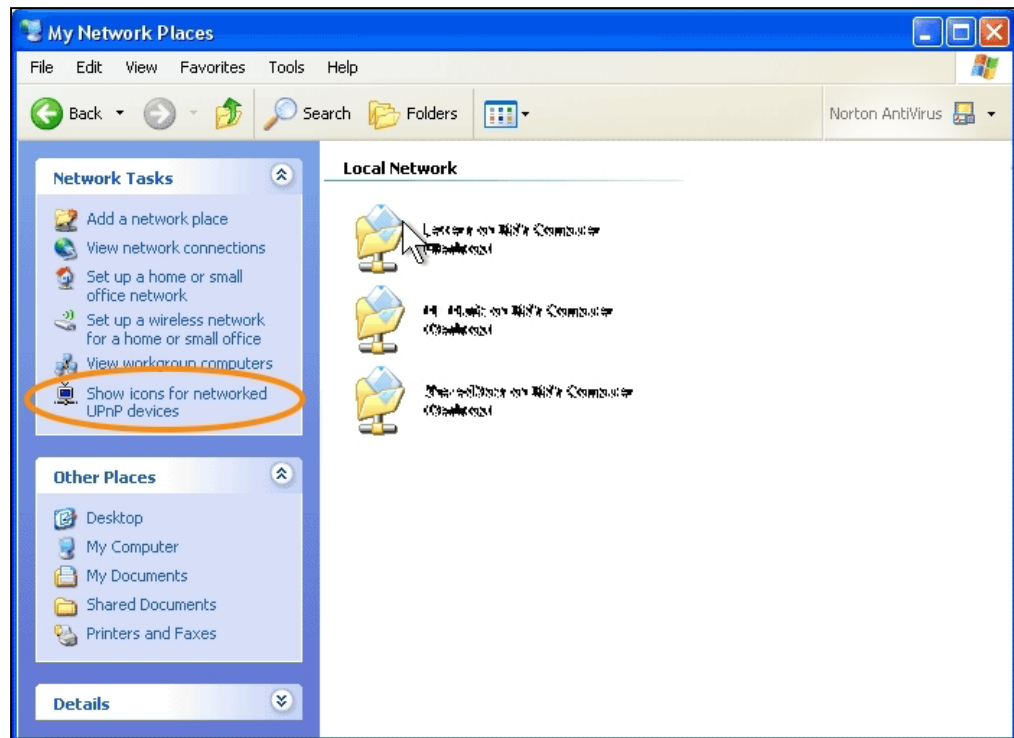
<Approach 1>

- Open the Control Panel from the Start Menu
- Select Add/Remove Programs
- Select Add/Remove Windows Components and open Networking Services section
- Click Details and select UPnP to setup the service
- The IP device icon will be added to "MY Network Places"
- User may double click the IP device icon to access IE browser

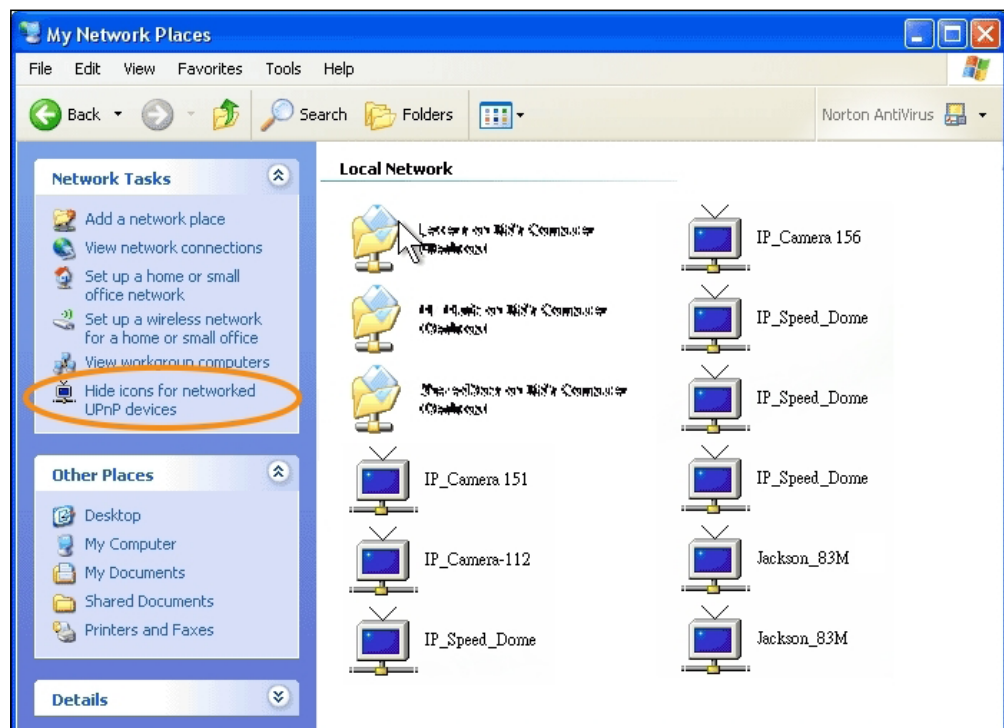
<Approach 2>

- Open "My Network Space", and click "Show icons for networked UPnP devices" in the tasks column on the left of the page.

Windows may ask your confirmation for enabling the components.
Click "Yes".



- Now you can see the IP device under the LAN. Double-click the icon to access the camera via web browser. To disable the UPnP, click "Hide icons for networked UPnP devices" in the tasks column.



e. RTSP setting

RTSP Setting		
RTSP Server:	<input checked="" type="radio"/> Enabled <input type="radio"/> Disabled	
RTSP Authentication:	Disable ▼	
RTSP Port :	554	
RTP Start Port:	5000	[1024..9997]
RTP End port:	9000	[1027..10000]

If you have a media player that supports RTSP protocol, you can use it to receive the video streaming from IP camera. The RTSP address can be set for two streamings respectively. Please jump to Chapter V-C: "[Video Setting](#)". There're setting field for RTSP address of two streamings.

(i) RTSP Server: enable or disable

(ii) RTSP Authentication:

"Disable" means everyone who knows your camera IP Address can link to your camera via RTSP. No username and password are required.

Under "Basic" and "Digest" authentication mode, the camera asks the user to give username and password before allows accessing. The password are transmitted as clear text under basic mode, which provides a lower level of security than under digest mode.

Make sure your media player supports the authentication schemes.

(iii) RTSP Port: setup port for RTSP transmitting (Default: 554)

(iv) RTSP Start and End Port: in RTSP mode, you may use TCP and UDP for connecting. TCP connection uses RTSP Port (554). UDP connection uses RTSP Start and End Port.

f. Multicast Setting (Based on the RTSP Server)

Multicast Setting (Based on the RTSP Server)		
Streaming 1:		
IP Address:	234.5.6.78	[224.3.1.0 ~ 239.255.255.255]
Port:	6000	[1 ~ 65535]
TTL:	15	[1 ~ 255]
Streaming 2:		
IP Address:	234.5.6.79	[224.3.1.0 ~ 239.255.255.255]
Port:	6001	[1 ~ 65535]
TTL:	15	[1 ~ 255]

Multicast is a bandwidth conservation technology. This function allow several user to share the same packet sent from IP camera. To use

Multicast, appoint IP Address and port here. TTL means the life time of packet, The larger the value is, the more user can receive the packet.

To use Multicast, be sure to enable the function "Force Multicast RTP via RTSP" in your media player. Then key in the RTSP path of your camera: "rtsp://(IP address)/" to receive the multicast.

g. ONVIF

ONVIF		
ONVIF:	<input checked="" type="radio"/> v1.02	<input type="radio"/> v1.01 <input type="radio"/> Disabled
Security:	<input type="radio"/> Enabled	<input checked="" type="radio"/> Disabled
RTSP Keepalive:	<input checked="" type="radio"/> Enabled	<input type="radio"/> Disabled

(i) Choose your ONVIF version and settings.

Under ONVIF connection, the video will be transmitted by RTSP. Be sure to enable the RTSP server in IP setting, or you're not able to receive the video via ONVIF.

(ii) RTSP Keepalive:

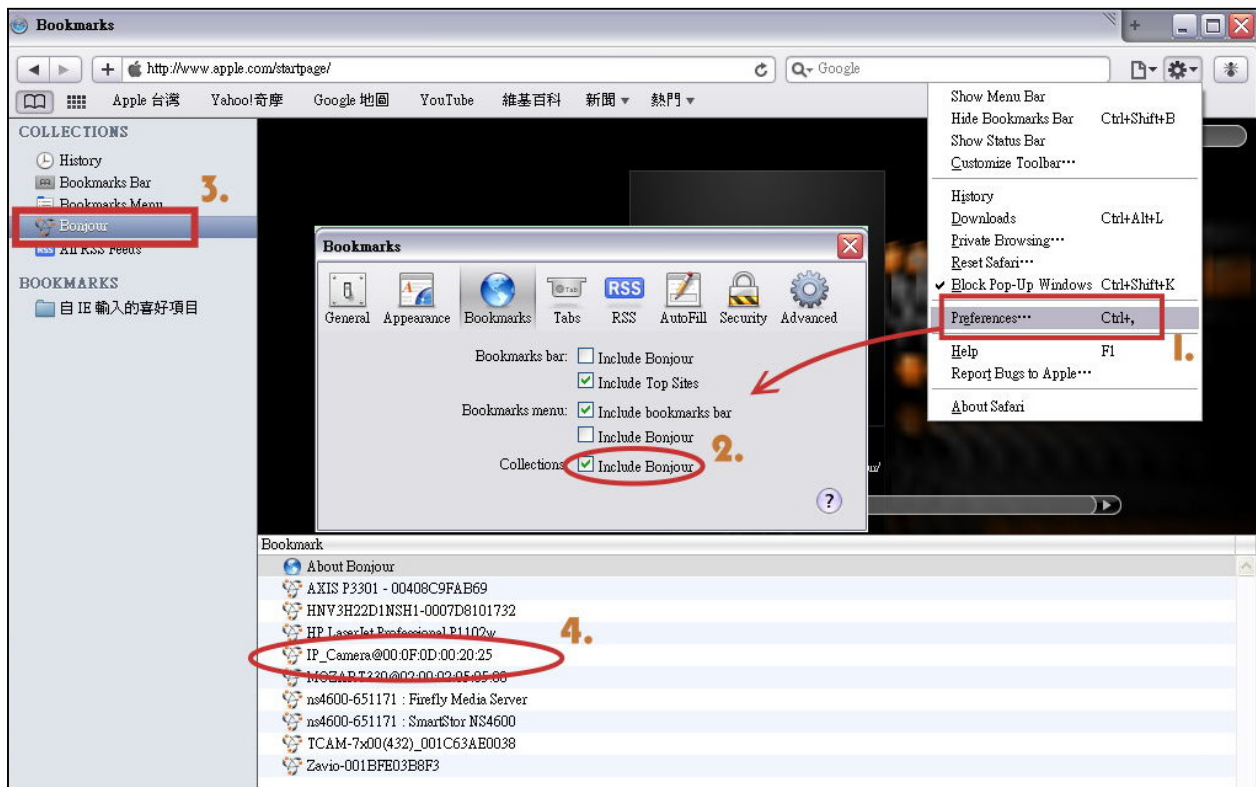
When the function is enabled, the camera checks once in a while if the user who links to the camera via ONVIF still keeps connecting. If the connection had been broken, the camera stop transmitting video to user.

h. Bonjour

Bonjour		
Bonjour:	<input type="radio"/> Enabled	<input checked="" type="radio"/> Disabled
Bonjour Name:	<input type="text" value="IP_Camera"/>	@00:0F:0D:00:28:4D

This function enable MAC systems to link to this IP camera. Key in the name here.

The web browser "Safari" also has Bonjour function. Tick "Include Bonjour" in the bookmark setting, and you can see the IP camera appearing under the bonjour category. Click the icon to connect the IP camera.



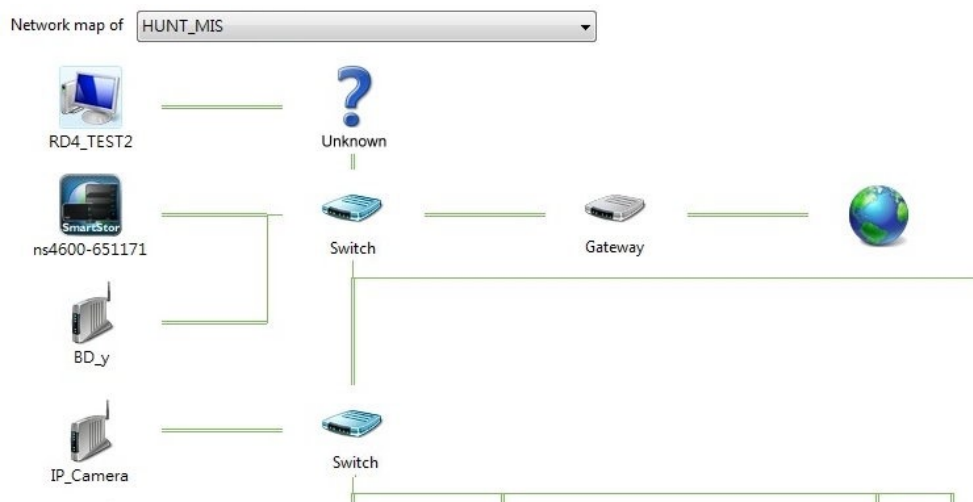
i. LLTD



If your PC supports LLTD, enable this function then you can check the connection status, properties, and device position(like IP address) of this IP Camera in the network map.

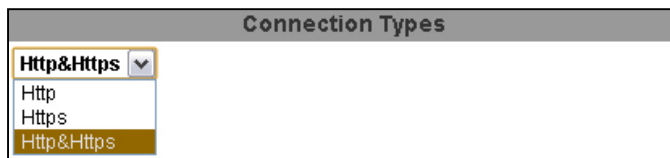
In the computer running Windows Vista or Windows 7, you can find LLTD through the path:

Call out the Control Panel → Network and Internet → Network and Sharing Center → Click "See full map".



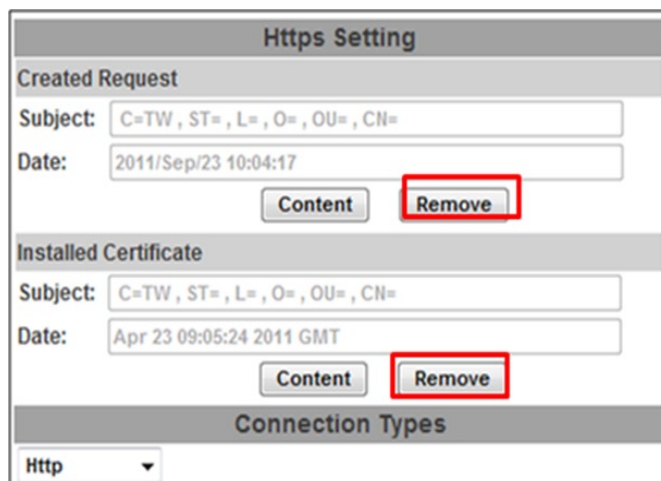
2. Advanced

- a. Https (Hypertext Transfer Protocol Secure): Https can help protect streaming data transmission over the internal on the higher security level. You can select the connection type. "Https" means user cannot connect the camera via Http protocol. The Https path will be: "https://(IP address)/". If you select "Http & Https", both the Http and Https path can be used to access the camera.



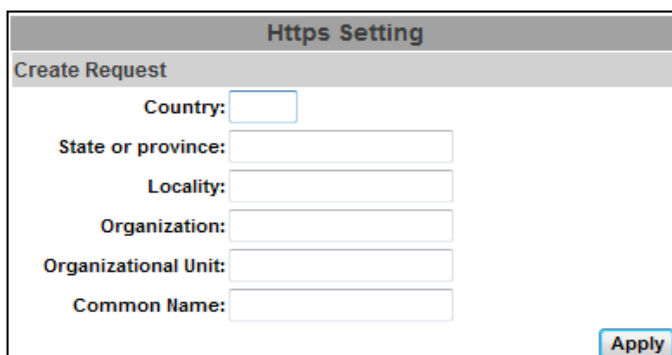
The image shows a dropdown menu titled "Connection Types". The menu is open, showing three options: "Http&Https" (selected), "Http", and "Https".

- (i) Remove the existing setting: Before setting new request, please remove old secure identification. Select "Http" connection type and click "Remove".



The image shows the "Https Setting" interface. It has two main sections: "Created Request" and "Installed Certificate". Each section has a "Subject" field, a "Date" field, and two buttons: "Content" and "Remove". The "Remove" buttons in both sections are highlighted with red boxes. At the bottom, there is a "Connection Types" dropdown menu set to "Http".

- (ii) Created Request: Setting the secure identification and apply it.



The image shows the "Create Request" form within the "Https Setting" interface. It contains several input fields for setting the secure identification: "Country:", "State or province:", "Locality:", "Organization:", "Organizational Unit:", and "Common Name:". An "Apply" button is located at the bottom right.

- (iii) There are two ways to set Certificate- Install Signed Certificate or Create Self-Signed Certificate.



The screenshot shows a web interface for configuring certificates. It has two main sections: "Install Signed Certificate" and "Create Self-Signed Certificate".

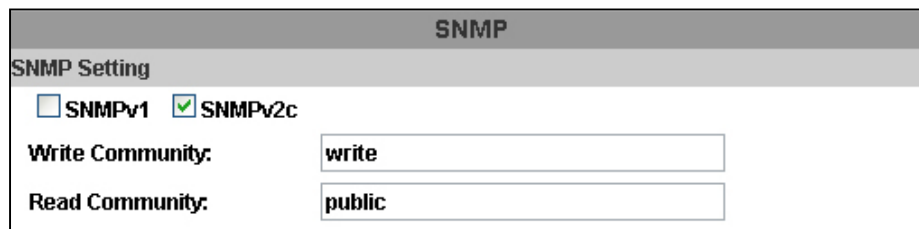
Install Signed Certificate: This section contains a text input field for the "Signed Certificate:" and a "瀏覽..." (Browse...) button. An "Apply" button is located at the bottom right of this section.

Create Self-Signed Certificate: This section contains several text input fields for certificate details: "Country:", "State or province:", "Locality:", "Organization:", "Organizational Unit:", and "Common Name:". There is also a "Validity:" field followed by a "Days" field. An "Apply" button is located at the bottom right of this section.

b. SNMP(Simple Network Management Protocol)

SNMP provides a simple framework for administering networked hardware. To manage the IP camera, you have to prepare a MIB browser or similar tools first. SNMPv1, SNMPv2c, and SNMPv3 can be enabled simultaneously.

- (i) SNMPv1 and SNMPv2:



The screenshot shows the "SNMP" configuration page. At the top is a header "SNMP". Below it is a section titled "SNMP Setting".

Under "SNMP Setting", there are two checkboxes: "SNMPv1" (unchecked) and "SNMPv2c" (checked). Below these are two text input fields: "Write Community:" with the value "write" and "Read Community:" with the value "public".

The term "Community name" in SNMPv1 and SNMPv2c can be roughly regarded as key. The person who has the community name has the authority to read or edit the information of IP camera via SNMP.

Tick the box to enable SNMPv1 or SNMPv2c protocol, and specify the community name for write(read and write) and read(read-only). The user who use read community name to access the IP camera cannot modify any data of this camera.

(ii) SNMPv3:

☒ **SNMPv3**

Write Security Name:

write

Authentication Type:

☒ MD5 ☐ SHA

Authentication Password:

.....

Encryption Type:

☒ DES ☐ AES

Encryption Password:

.....

Read Security Name:

public

Authentication Type:

☒ MD5 ☐ SHA

Authentication Password:

.....

Encryption Type:

☒ DES ☐ AES

Encryption Password:

.....

For data security reason, the authentication and encryption assurances are added when developing SNMPv3. The user has to give not only the security name(the same as "community name" in v1&v2c, or sometimes we call it "context name") but the password in order to access the IP camera. Please set security name, authentication type, authentication password, encryption type, encryption password of write and read respectively. The password must be 8~64 bits in length.

Different from in SNMPv1 and v2c, the user have to create a account when using SNMPv3. In the account parameters, key in the security name and password you set in the camera to get accessing.

(iii) SNMPv1/SNMPv2 Trap:

☒ **SNMPv1/v2c Trap**

Trap Address:

192.168.40.159

Trap Community:

public

Trap Event:

☐ Cold Start

☒ Setting Changed

☒ Network Disconnected

☐ V3 Authentication Failed

☐ SD Insert/Remove

Apply

Trap is a mechanism that allows the a managed device to send messages to manager instead of waiting passively for polling from the manager. Specify the trap event. When those events happen, the camera will send the ring message to the Trap Address, which is usually the manager's IP address. Trap Community means the community that can receive the trap message.

- Cold Start: The camera starts up or reboots.
- Setting changed: The SNMP setting is changed.
- Network Disconnected: The network connection was broken down. (The camera will send trap messages after the network being connected again)
- V3 Authentication Failed: A SNMPv3 user account tries to get authentication but failed. (Due to incorrect password or community)
- SD Insert / Remove: A Micro SD card is inserted or removed.

c. Access List

IP FILTER

IP ADDRESS FILTER Setting

☒ Enable ip address filter

IPv4 Setting:

☐ allow
 ☒ deny

range address: -

IPv4 List:

No.	IP Address	Filter	Action
1	192.168.50.159	allow	<input type="button" value="remove"/>
2	192.168.50.151-192.168.50.161	deny	<input type="button" value="remove"/>
3			<input type="button" value="remove"/>
4			<input type="button" value="remove"/>
5			<input type="button" value="remove"/>
6			<input type="button" value="remove"/>
7			<input type="button" value="remove"/>
8			<input type="button" value="remove"/>
9			<input type="button" value="remove"/>
10			<input type="button" value="remove"/>

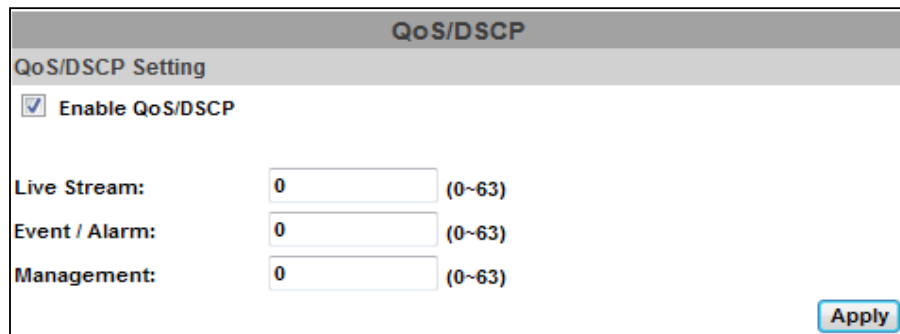
☐ Allow admin ip address always access this device
 Admin ip address:

You can deny a IP address or a range of IP address so that they cannot access the IP camera. Tick the "enable" box, key in the IP address you want to deny, select "deny" then click "Add" to add it to the list.

You can also choose to deny a range of IP address but allow one or several IP address of them. Take the picture above for example, IP address 192.168.50.151~161 are not allowed to connect to the camera, but only

192.168.50.159 can access. **Note: In the list "allow" condition must be ranked before "deny" condition.** For example, if we exchange the sequence, set "Deny: 192.168.50.151~192.168.50.161" for the first item and "Allow: 192.168.50.159" for the second item in the list, the IP "192.168.50.159" turns out to be denied by the camera because the "deny" condition has the priority according to our ranking way.

d. QoS/DSCP(Quality of Server/Differentiated Services Code-point)



DSCP specifies a simple mechanism for classifying and managing network traffic and provide QoS on IP networks. DSCP is a 6-bit in the IP header for packet classification purpose.

The number 0~63 for Live Stream, Event / Alarm, and Management represent the ratio that the bandwidth is divided. For example, if you set 5, 10, and 20 for the three items, then the bandwidth of the three item is 5:10:20. There is no difference between setting "0, 0, 0" or "63, 63, 63" because under these two setting the three items will get equal bandwidth (1/3).

e. IEEE 802.1x

IEEE 802.1x/EAP-TLS

IEEE 802.1x Setting

☐ Enable IEEE 802.1x

Eapol version: ☒ v1 ☐ v2

Identity:

Private key password:

Apply

CA certificate:

Upload

瀏覽...

Remove

Status:

Client certificate:

Upload

瀏覽...

Remove

Status:

Client private key:

Upload

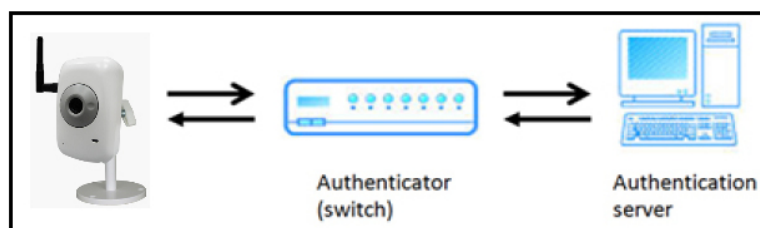
瀏覽...

Remove

Status:

IEEE 802.1x is an IEEE standard for port-based Network Access Control. It provides an authentication mechanism to device wishing to attach to a LAN or WLAN.

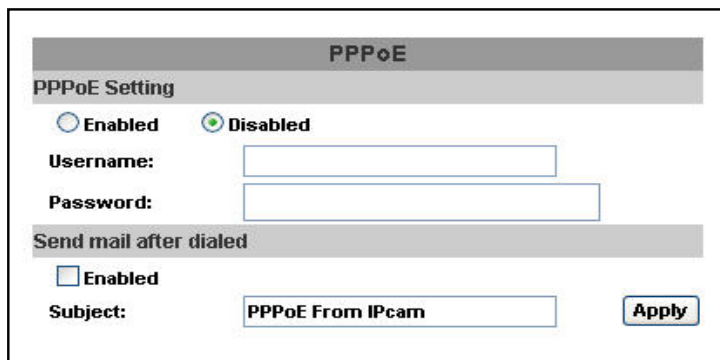
The EAPOL protocol support service identification and optional point to point encryption over the local LAN segment.



Please check what version of the authenticator and authentication server support. This camera supports EAP-TLS method. Please enter ID, password issued by the CA, then upload related certificates.

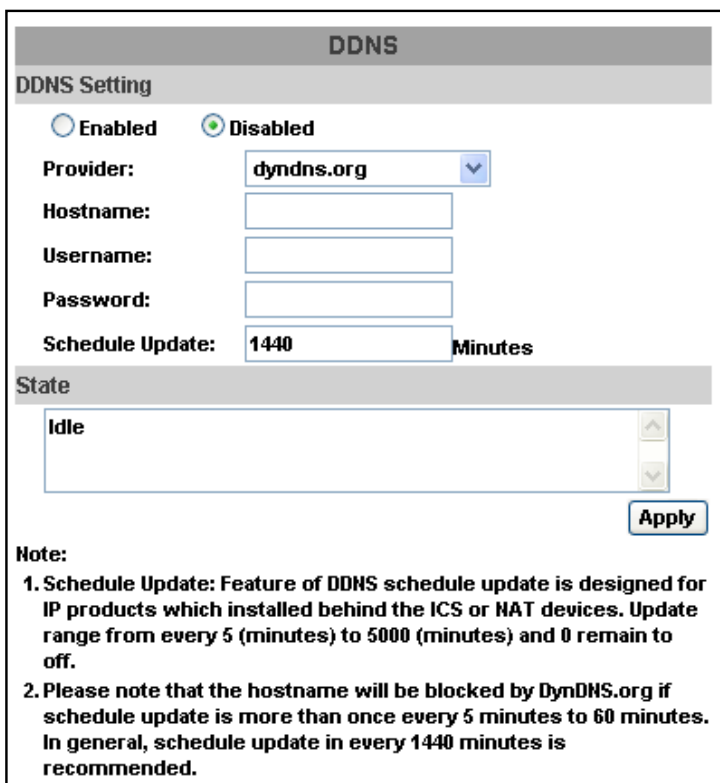
3. PPPoE & DDNS

- a. PPPoE: Select “Enabled” to use PPPoE. Key-in Username and password for the ADSL connection. Send mail after dialed: When connect to the internet, it will send a mail to a specific mail account. For the mail setting, please refer to Server settings.



The screenshot shows the 'PPPoE' configuration page. At the top is a header 'PPPoE'. Below it is a sub-header 'PPPoE Setting'. There are two radio buttons: 'Enabled' (unselected) and 'Disabled' (selected). Below these are two text input fields labeled 'Username:' and 'Password:'. A section titled 'Send mail after dialed' contains a checkbox labeled 'Enabled' (unchecked) and a text input field for 'Subject:' with the value 'PPPoE From IPcam'. An 'Apply' button is located at the bottom right.

- b. DDNS:



The screenshot shows the 'DDNS' configuration page. At the top is a header 'DDNS'. Below it is a sub-header 'DDNS Setting'. There are two radio buttons: 'Enabled' (unselected) and 'Disabled' (selected). Below these are several fields: 'Provider:' with a dropdown menu showing 'dyndns.org', 'Hostname:', 'Username:', 'Password:', and 'Schedule Update:' with a text input '1440' and the label 'Minutes'. A section titled 'State' contains a dropdown menu showing 'Idle'. An 'Apply' button is at the bottom right. Below the form is a 'Note:' section with two paragraphs of text.

Note:

1. Schedule Update: Feature of DDNS schedule update is designed for IP products which installed behind the ICS or NAT devices. Update range from every 5 (minutes) to 5000 (minutes) and 0 remain to off.
2. Please note that the hostname will be blocked by DynDNS.org if schedule update is more than once every 5 minutes to 60 minutes. In general, schedule update in every 1440 minutes is recommended.

It supports DDNS (Dynamic DNS) service.

- (i) Enable this service
- (ii) Key-in the DynDNS server name, user name, and password.
- (iii) Set up the IP Schedule update refreshing rate.
- (iv) Click “Apply”
- (v) If setting up IP schedule update too frequently, the IP may be blocked.
In general, schedule update every day (1440 minutes) is recommended

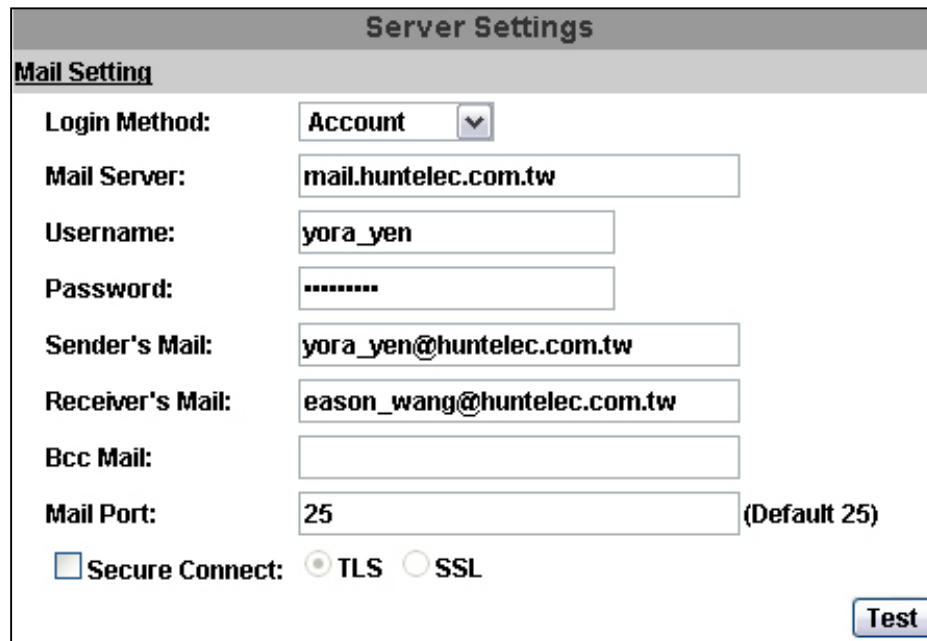
(vi) DDNS Status

- Updating: Information update
- Idle: Stop service
- DDNS registration successful, can now log by <http://<username>.ddns.camddns.com>: Register successfully.
- Update Failed, the name is already registered: The user name has already been used. Please change it.
- Update Failed, please check your internet connection: Network connection failed.
- Update Failed, please check the account information you provide: The server, user name, and password may be wrong.

4. Server setting

The settings of Email, FTP and SAMBA are used when the event happens, schedule snapshot executes, or the alarm input is triggered. Select the item to display the detailed configuration options. You can configure either one or all of them.

a. Mail Setting:

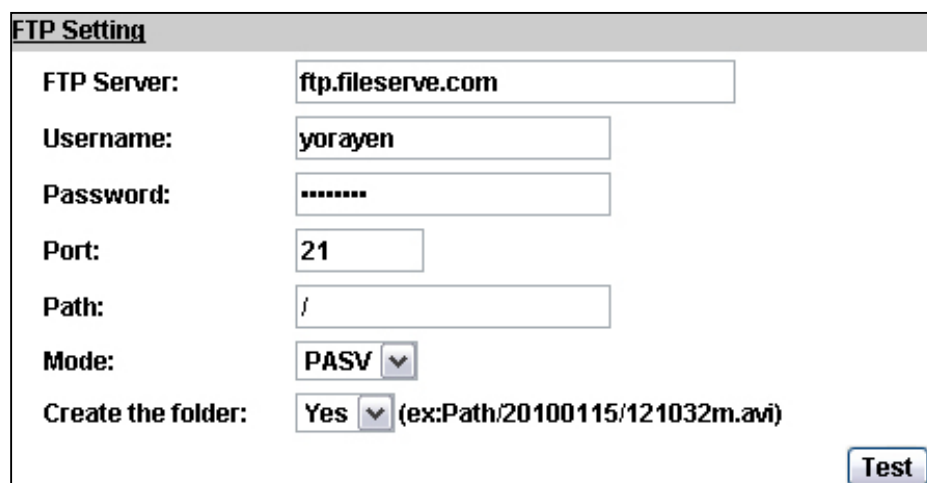


The 'Mail Setting' window is part of the 'Server Settings' section. It contains the following fields and options:

- Login Method:** A dropdown menu set to 'Account'.
- Mail Server:** A text box containing 'mail.huntelec.com.tw'.
- Username:** A text box containing 'yora_yen'.
- Password:** A text box with masked characters '.....'.
- Sender's Mail:** A text box containing 'yora_yen@huntelec.com.tw'.
- Receiver's Mail:** A text box containing 'eason_wang@huntelec.com.tw'.
- Bcc Mail:** An empty text box.
- Mail Port:** A text box containing '25', with '(Default 25)' noted to the right.
- Secure Connect:** A checkbox that is unchecked, followed by radio buttons for 'TLS' (selected) and 'SSL'.
- Test:** A button in the bottom right corner.

Set up the server address and account information of your e-mail. Click "Apply" to save the setting, then use "Test" button to test the server connection. A message box will tell you "OK!" if it works, and a test e-mail will be sent to receiver's mail address.

b. FTP:



The 'FTP Setting' window contains the following fields and options:

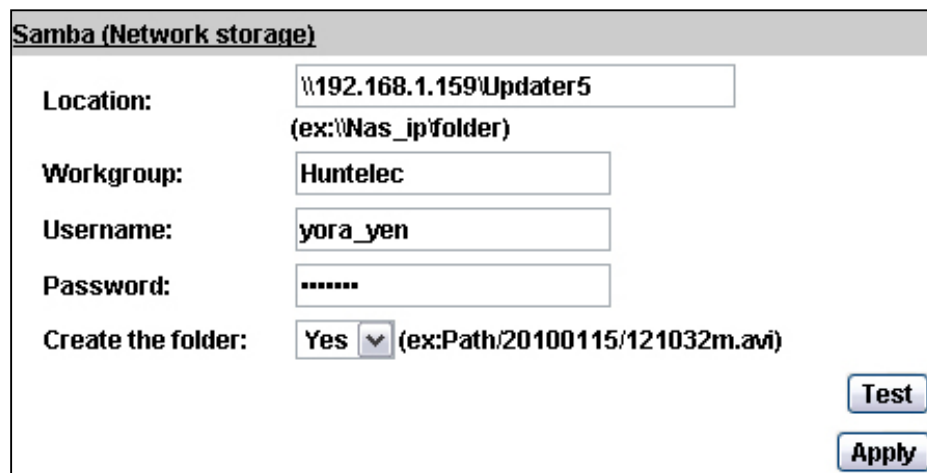
- FTP Server:** A text box containing 'ftp.fileserve.com'.
- Username:** A text box containing 'yorayen'.
- Password:** A text box with masked characters '.....'.
- Port:** A text box containing '21'.
- Path:** A text box containing '/'.
- Mode:** A dropdown menu set to 'PASV'.
- Create the folder:** A dropdown menu set to 'Yes', with '(ex:Path/20100115/121032m.avi)' shown to the right.
- Test:** A button in the bottom right corner.

Set up the server address and account information of your FTP. Click "Apply" to save the setting, then use "Test" button to test the server

connection. A message box will tell you “OK!” if it works, and a test file will be uploaded to FTP space.

In PORT mode, the FTP server builds the connection to the user's data port actively. However, from the user-side firewall's standpoint, the action of connecting from FTP server is often considered to be dangerous and should be blocked. In PASV mode, the problem is solved: The FTP server waits for the data transmission connection built by the user. Make sure that the server supports the mode you select.

c. Samba:



Samba (Network storage)

Location: \\192.168.1.159\Updater5
(ex: \\Nas_ip\folder)

Workgroup: Huntelec

Username: yora_yen

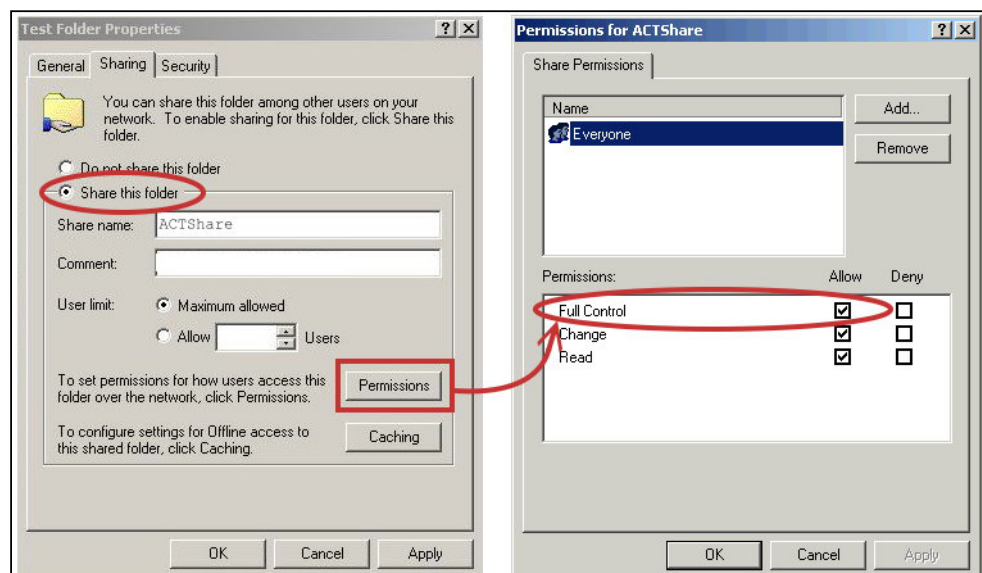
Password:

Create the folder: Yes (ex: Path/20100115/121032m.avi)

Test **Apply**

Select this option to send the media files via a network neighborhood when an event is triggered. Click “Apply” to save the setting, then use “Test” button to test the server connection. A message box will tell you “OK!” if it works, and a test document will be created in the location.

If the test failed, check the sharing setting of your location folder. The folder properties must be “shared” and the permissions must be “Full Control” as the picture.



Test Folder Properties

Sharing | General | Security

You can share this folder among other users on your network. To enable sharing for this folder, click Share this folder.

☐ Do not share this folder

☒ **Share this folder**

Share name: ACTShare

Comment:

User limit: ☒ Maximum allowed ☐ Allow [] Users

To set permissions for how users access this folder over the network, click **Permissions**.

To configure settings for Offline access to this shared folder, click Caching.

Permissions for ACTShare

Share Permissions

Name: Everyone

Permissions:

	Allow	Deny
Full Control	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Change	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Read	<input checked="" type="checkbox"/>	<input type="checkbox"/>

5. Wireless Setting (Optional): Support 802.11 b/g/n

To set up the IP camera via wireless network, use ethernet cable to connect the camera first. After you finish the wireless setting and save it, remove the ethernet cable.

Note: The IP address is the same under both wireless and wired network. If the ethernet cable is plugged in the camera, the IP camera will use it to link to the Internet instead of wireless router.

a. Status of Wireless Networks

Wireless Setting			
Status of Wireless Networks			
SSID	Mode	Security	Signal Strength
RHOSON	Infrastructure	WEP	47
hunt-ZyXEL	Infrastructure	WPA1PSKWPA2PSK/TKIPAES	42
hunt_sal4_showroom	Infrastructure	WPA1PSKWPA2PSK/TKIPAES	68
HUNT_MIS	Infrastructure	WPA2PSK/AES	52
fan	Infrastructure	WPAPSK/TKIP	52
MLink	Infrastructure	WPA1PSKWPA2PSK/TKIPAES	31
sales-4 second	Infrastructure	WPAPSK/TKIP	47
eCoffee	Infrastructure	WPA2PSK/TKIPAES	31
ZyXEL-NVR	Infrastructure	WPA1PSKWPA2PSK/TKIPAES	13
Lanner Wireless	Infrastructure	WPA/TKIPAES	26

The camera scans and shows the SSID, Mode, Security, and Signal Strength of wireless network here.

b. Wireless Setting

Wireless Setting

MAC Address: 00:0D:F0:64:27:AC

Mode:

Ad-hoc

Operation Mode:

Auto

SSID:

Default

Domain:

FCC (1~11Ch)

Channel:

6

Security:

None

Apply

- (i) Mode: Infrastructure mode is used to link to the wireless router. Ad-hoc mode is used to link to the PC directly. "Domain" and "Channel" options appear only in the Ad-hoc mode.
- (ii) SSID: The ID of wireless network service.
- (iii) Domain: The wireless network standards are different in each region.

Please select as the wireless system in your location. FCC is American standard. ETSI is European standard. JP is Japan standard.

(iv) Channel: Assign a channel for the camera in order to avoid interference.

(v) Security: Select WEP, WPA-PSK, or WPA2-PSK according to your wireless router setting.

c. WEP Setting

WEP Setting	
Authentication:	Shared Key ▼
Encryption:	64 bit ▼
Key Type:	HEX ▼ (10 character max)
Key 1:	<input type="radio"/> <input type="text"/>
Key 2:	<input checked="" type="radio"/> <input type="text"/>
Key 3:	<input type="radio"/> <input type="text"/>
Key 4:	<input type="radio"/> <input type="text"/>

(i) Authentication: Open System or Shared Key, according to your wireless router.

(ii) Encryption: The option determine the length of key password. In HEX type, 10 characters are allowed if you select 64 bit while 26 characters are allowed if selecting 128bit; In ASCII type, 5 characters are allowed if you select 64 bit while 13 characters are allowed if selecting 128bit.

(iii) Key Type: In HEX type, the key password can only be hexadecimal numbers. In ASCII type, the key password can be any letters and numbers. (Capital and lowercase letters are regarded as different.)

(iv) Key 1~4: Key in the key password. The length and type must be consistent with the settings above.

d. WPA-PSK Setting

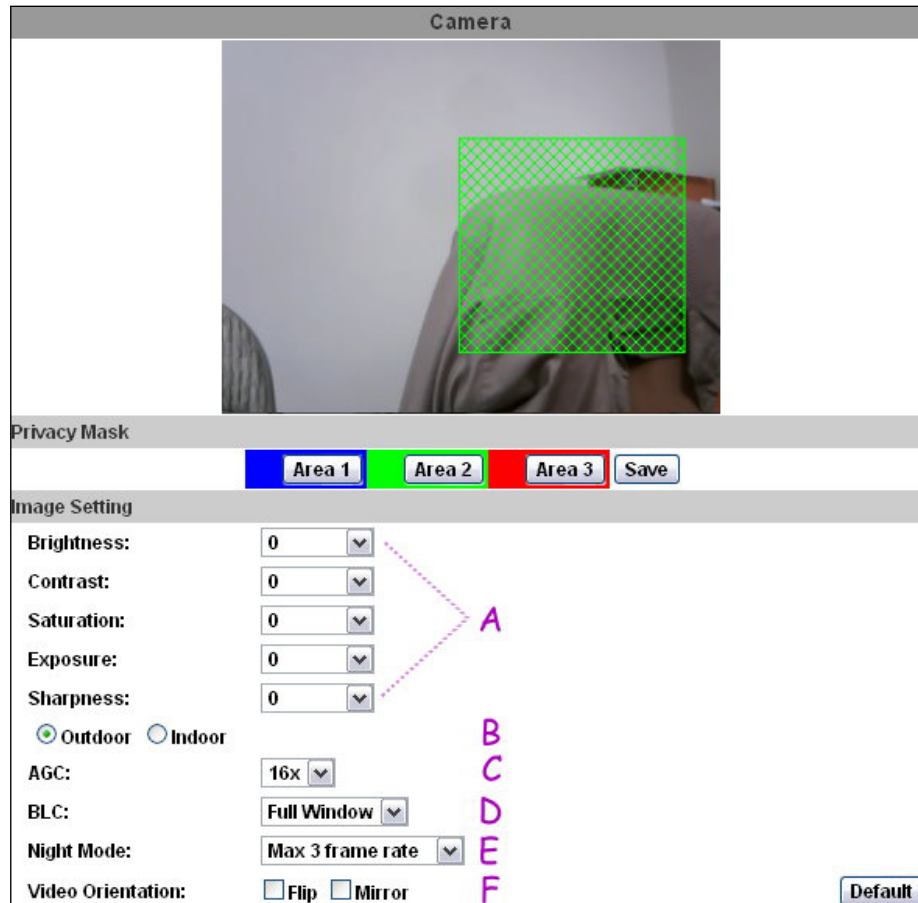
WPA-PSK Setting	
Encryption	TKIP ▼
Pre-Shared Key:	<input type="text" value="23133690"/> (ASCII format, 8~63)

(i) Encryption: TKIP or AES, according to your wireless router.

(ii) Pre-Shared Key: Key in the key password here. Any letters and numbers are allowed. (Capital and lowercase letters are regarded as different.)

C. A/V Setting

1. Image Setting



For the security purpose, there are three areas can be setup for privacy mask. Click Area button first and drag an area on the above image. Finally, click Save button to reserve the setting.

Please refer to the details below for Image setting:

- a. Brightness, Contrast, Saturation, Exposure, and Sharpness can be adjusted here.
- b. Outdoor / Indoor: Choose as the location of your camera.
- c. AGC: The sensitivity of camera can adjusts with the environmental light in order to avoid the images too light or too dark.
- d. BLC: To make the dark zone resulting from back light lighter and clearer.
- e. Night Mode: This function increases the sensitivity of camera to get brighter image at night. The smaller the Max frame rate you select, the slower the shutter speed becomes so that the image will get lighter, and moving subjects might be blurred.
- f. Video Orientation: Flip or mirror the image as your requirement.

2. Video Setting

a. Video System: NTSC or PAL

b. Basic Mode of Streaming 1 and Streaming 2:

Video Setting	
Video System:	NTSC
Streaming 1 Setting	
<input checked="" type="radio"/> Basic Mode <input type="radio"/> Advanced Mode	
Resolution:	VGA - 640x480
Quality:	Standard
Video Frame Rate:	30 FPS
Video Format:	H.264
RTSP Path:	exrtsp://IP_Address/ Audio:G.711
Streaming 2 Setting	
<input checked="" type="radio"/> Basic Mode <input type="radio"/> Advanced Mode <input type="radio"/> Close	
Resolution:	QVGA - 320x240
Quality:	Standard
Video Frame Rate:	30 FPS
Video Format:	JPEG
RTSP Path:	v2 exrtsp://IP_Address/v2 Audio:G.711

(i) Resolution: 640x480, 320x240, or 176x144

(ii) Quality: The higher the quality is, the bigger the file size is. It might affect Internet transmitting speed if the file gets too large.

(iii) Video Frame Rate: The video refreshing rate per second. The max value is affected by the input resolution you choose.

(iv) Video Format: H.264, MPEG4, or M-JPEG

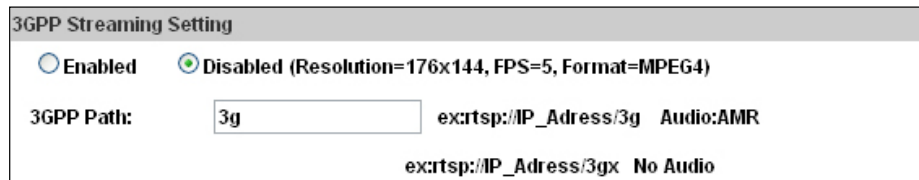
(v) RTSP Path: Set the RTSP output connecting route

c. Advanced Mode of Streaming 1 and Streaming 2:

Streaming 1 Setting	
<input type="radio"/> Basic Mode <input checked="" type="radio"/> Advanced Mode	
Resolution:	VGA - 640x480
Bitrate Control Mode:	<input checked="" type="radio"/> CBR <input type="radio"/> VBR
Video Quantitative:	7
Video Bitrate:	1Mbps
Video Frame Rate:	30 FPS
GOP Size:	1 X FPS GOP = 30
Video Format:	H.264
RTSP Path:	exrtsp://IP_Address/ Audio:G.711
Streaming 2 Setting	
<input type="radio"/> Basic Mode <input checked="" type="radio"/> Advanced Mode <input type="radio"/> Close	
Resolution:	QVGA - 320x240
Quality:	Standard
Video Frame Rate:	30 FPS
Video Format:	JPEG
RTSP Path:	v2 exrtsp://IP_Address/v2 Audio:G.711

- (i) Resolution: 640x480, 320x240, or 176x144
- (ii) Bitrate Control Mode: In CBR(Constant Bit Rate) mode, the bitrate keeps consistent all over the video. In VBR(Variable Bit Rate) mode, the bitrate changes with the complexity extent of the video data. VBR provides a better compression way and the file may be smaller. However, the VBR file size cannot be predicted.
- (iii) Video Quantitative: The quality parameter of VBR. You can choose 1~10 compression rate
- (iv) Video Bitrate: The quality parameter of CBR. You can choose 32kbps~8Mbps. The higher the value is, the higher the image quality is.
- (v) Video Frame Rate: The video refreshing rate per second. The max value is affected by the input resolution you choose.
- (vi) GOP Size: It means "Group of Pictures". The higher the GOP is, the better the quality is.
- (vii) Video Format: H.264, MPEG4, or M-JPEG
- (viii) RTSP Path: RTSP output connecting route

d. 3GPP Streaming mode:



The rtsp here is separated from the rtsp setting in the "IP SETTING". 3GPP Streaming can still work even you select "disabled" in the rtsp server option of IP Setting.

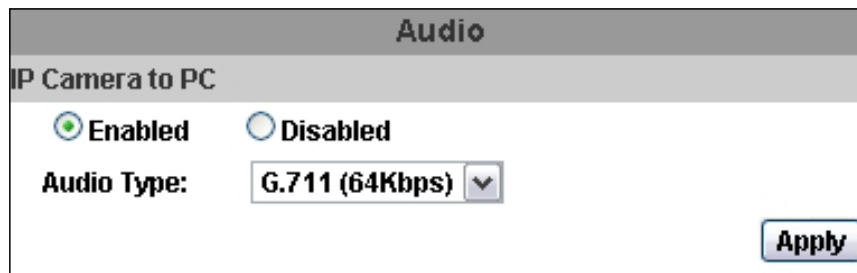
3GPP mode fixed setting: 176x144 resolution, 5FPS, Video compression: MPEG4, Audio compression: AMR.

- (i) Enable or Disable 3GPP Streaming
- (ii) 3GPP Path: 3GPP output connecting route. If the IP address of your camera is 192.168.40.150, and you key in "3g" in the column, the 3GPP path will be rtsp://192.168.40.150/3g.

3. Audio:

IP Camera supports 2-way audio. Audio can be received by the built-in mic in the IP camera and transmitted to remote PC. User can also send audio from remote PC mic to IP Camera's external speaker.

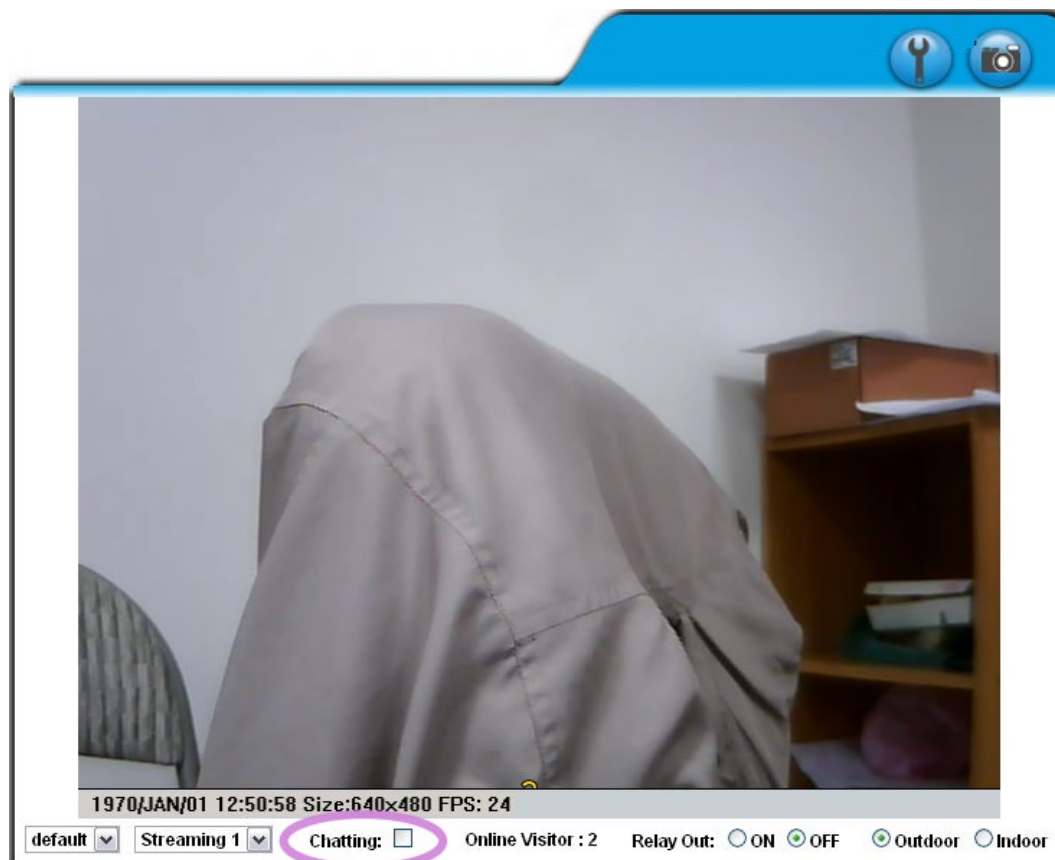
a. IP Camera to PC



To receive Audio from IP camera, select "Enable" to start this function. The Audio compression format can be chosen from 3 options.

b. PC to IP Camera

Tick "chatting" box in the browsing page, then your voice can be propagated from PC to camera.



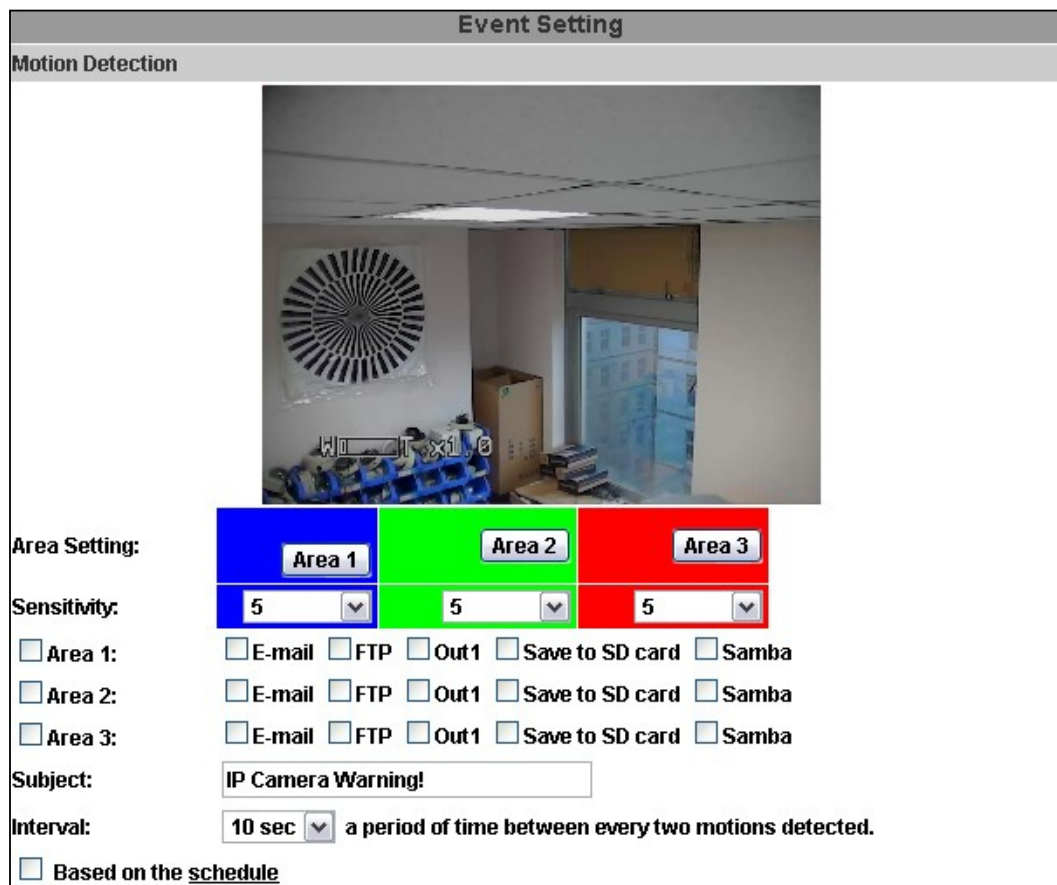
If "Chatting" and "Save to SD card" are enabled simultaneously, the sound quality might be affected and becomes not smooth.

D. Event List

IP Camera provides multiple event settings.

1. Event Setting

a. Motion Detection



Event Setting

Motion Detection

Area Setting:

Sensitivity:

☐ Area 1: ☐ E-mail ☐ FTP ☐ Out1 ☐ Save to SD card ☐ Samba

☐ Area 2: ☐ E-mail ☐ FTP ☐ Out1 ☐ Save to SD card ☐ Samba

☐ Area 3: ☐ E-mail ☐ FTP ☐ Out1 ☐ Save to SD card ☐ Samba

Subject: IP Camera Warning!

Interval: 10 sec a period of time between every two motions detected.

☐ Based on the schedule

IP CAMERA allows 3 areas motion detection. When motion is detected, it can send video to some specific mail addresses, trigger the output device, or save video to remote FTP / Micro SD card / Samba. To set up the motion area, click "Area Setting". Using mouse to drag and draw the area.

- Interval:

For example, if you select "10 sec" here, once the motion is detected and action is triggered, it cannot be triggered again within 10 seconds.

- Based on the schedule:

When the option box is ticked, only during the selected schedule time the motion detection is enabled. That is, for example, the 11th hour of Monday has not been colored in the schedule table, then no action will be triggered even the camera detects motion during 11:00~12:00 on Monday.

b. Record File

Record File	
File Format:	AVI File(with Record Time Setting) ▼

Choose one of the format, AVI or JPEG

c. Record Time Setting

Record Time Setting			
Pre Alarm:	5 sec ▼	Post Alarm:	5 sec ▼

Set up the video recording time for Pre Alarm and Post Alarm when motion is detected, I/O, or other devices is triggered.

Note: Pre/Post Alarm record time is base on record time setting and restricted to IP Cam built-in Ram memory. If the quantity of data is too huge or video quality too high, recording frame might drop or decrease on post alarm recording time.

d. Network Dis-connected

Network Dis-connected	
Dis-connected:	<input type="checkbox"/> Save to SD card

To avoid video loss, the camera will start to save the video to local SD card when it detect no network connection. The video recording will continuously be saved into SD card and divided into every 5 minutes a file until the network is reconnected successfully. The oldest file will be deleted if the capacity of SD card is full.

This function is only enabled under wire connection.


e. Network IP check:

Network IP Check	
IP Check:	<input type="radio"/> Enabled <input checked="" type="radio"/> Disabled
IP Address:	www.google.com
Interval:	30 sec ▼
IP Check:	<input type="checkbox"/> Save to SD card

Key in the target IP address and interval. The camera checks once in a while according to the setting interval time that if itself can linked to the target IP address. If connection failed, the camera starts to save the video to SD card.

2. Schedule

Schedule																								
All	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
Mon.																								
Tue.																								
Wed.																								
Thu.																								
Fri.																								
Sat.																								
Sun.																								

 With schedule setup.

Snapshot	
<input type="radio"/> Enabled	<input checked="" type="radio"/> Disabled
Snapshot:	<input type="checkbox"/> E-mail <input type="checkbox"/> FTP <input type="checkbox"/> Save to SD card <input type="checkbox"/> Samba
Interval:	<input type="text" value="10"/> Second(s) [1..50000]
File Name:	<input type="text" value="Snapshot"/>

- Schedule: After complete the schedule setup, the camera data will be recorded according to the schedule setup.
- Snapshot: After enable the snapshot function, user can select the storage position of snapshot file, the interval time of snapshot and the reserved file name of snapshot.
- Interval: The interval between two snapshots.

3. I/O Setting

a. Input Setting:

IP Camera supports input and output. When the input condition is triggered, it can trigger the relay, send the video to mail addresses /FTP server /SAMBA.

- Interval:

For example, if you select "10 sec" here, once the motion is detected and action is triggered, it cannot be triggered again within 10 seconds.

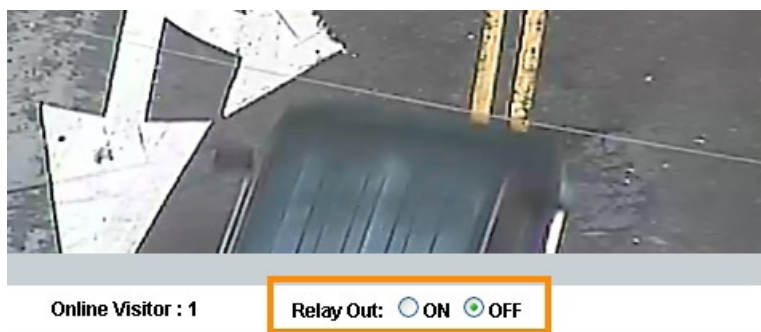
- Based on the schedule:

When the option box is ticked, only during the selected schedule time the I/O is enabled. That is, for example, the 11th hour of Monday has not been colored in the schedule table, then no action will be triggered even the camera detects input signal during 11:00~12:00 on Monday.

b. Output Setting:

The output mode affect the DO or relay out duration.

- (i) OnOff Switch: The camera triggers the external devise and lasts for 10 seconds. You can turn off the alarm manually by click "off" at the right bottom of the live video page.



- (ii) Time Switch: The camera triggers the external devise and lasts for certain of time according to the interval setting, and the user is not allowed to break off the alarm manually.

4. Log List

Log List	
System Logs	Logs
Motion Detection Logs	Logs
I/O Logs	Logs
All Logs	Logs

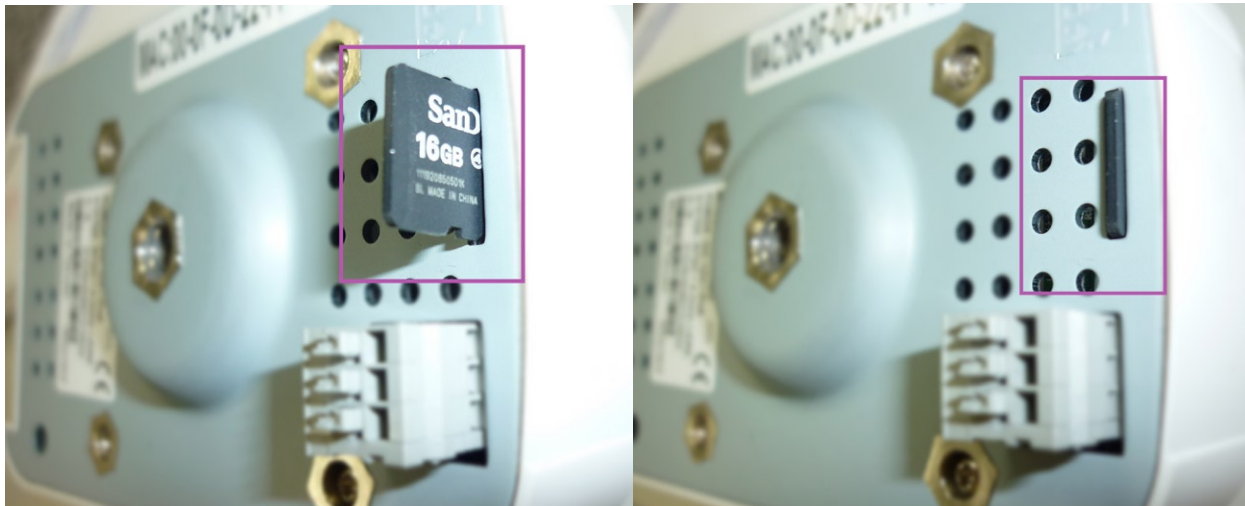
Sort by System Logs, Motion Detection Logs and I/O Logs. In addition, System Logs and I/O Logs won't lose data due to power failure.

System Log
[2012/07/03 16:22:39] 192.168.40.159 login by admin.
[2012/07/03 11:54:22] 192.168.40.132 login by admin.
[2012/07/02 19:08:52] 192.168.40.132 login by admin.
[2012/07/02 18:24:50] 192.168.40.132 login by admin.
[2012/07/02 14:37:05] 192.168.40.132 login by admin.
[2012/07/02 14:18:26] 192.168.40.132 login by admin.
[2012/07/02 09:00:25] 192.168.40.132 login by admin.
[2012/06/29 19:51:34] Streaming 2 going to Close.
[2012/06/29 19:51:34] Streaming 1 Video bitrate going to 5000 Kbps.

5. SD card

a. Playback

Please Insert Micro SD card before use it. Make sure pushing Micro SD card into the slot completely.



Click the date listed on this page, and it shows the list of the video. The video format is AVI. Click the video to start Microsoft Media Player to play it. To delete the video, check it, then click "Del".

2010/09/02			Del
Time	Video	Event Type	<input type="checkbox"/>
14:32:38	143238m.avi	Motion Detection	<input type="checkbox"/>
14:35:32	143532m.avi	Motion Detection	<input type="checkbox"/>
14:36:10	143610m.avi	Motion Detection	<input type="checkbox"/>
14:36:43	143643m.avi	Motion Detection	<input type="checkbox"/>
14:37:14	143714m.avi	Motion Detection	<input type="checkbox"/>
14:37:46	143746m.avi	Motion Detection	<input type="checkbox"/>
14:38:20	143820m.avi	Motion Detection	<input type="checkbox"/>
14:38:53	143853m.avi	Motion Detection	<input type="checkbox"/>

[Files link daily.](#)

b. SD Management

Choose "The 1st day" means the recoding file will be keep one day. Example: It is five o'clock now. Choose "The 1st day". The files will be kept from five o'clock yesterday to five o'clock today.

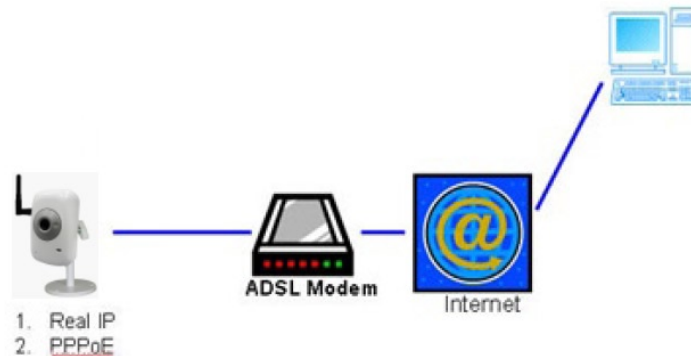
The oldest file will be deleted if the Micro SD card is full.

Playback	
No SD card	
SD Management	
Auto Deletion:	<div>Off ▾ (Keep 1/ 2/ 3/ 4...days)</div> <div>Off The 1st day The 2nd day The 3rd day The 4th day The 5th day The 6th day The 7th day The 8th day The 9th day The 10th day The 15th day The 20th day The 25th day The 30th day</div>
<div>Apply</div>	

Note : The use of the SD card will affect the operation of the IP Camera slightly, such as affecting the frame rate of the video.

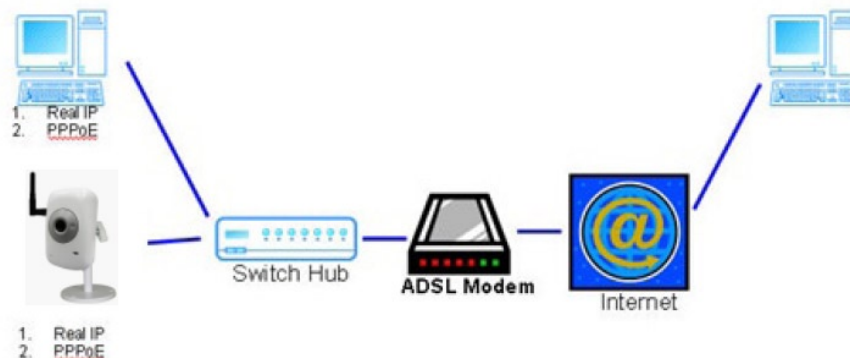
VI. Network Configuration

- Configuration 1:



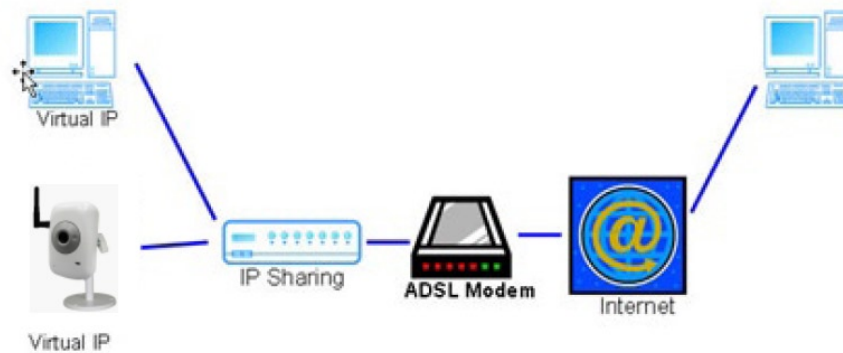
- a. Internet Access: ADSL or Cable Modem
- b. IP address: One real IP or one dynamic IP
- c. Only IP Camera connects to the internet
- d. For fixed real IP, set up the IP into IP Camera. For dynamic IP, start PPPoE.

- Configuration 2:



- a. Internet Access: ADSL or Cable Modem
- b. IP address: More than one real IP or one dynamic IP
- c. IP Camera and PC connect to the internet
- d. Device needed: Switch Hub
- e. For fixed real IP, set up the IP into IP Camera and PC. For dynamic IP, start PPPoE.

- Configuration 3:

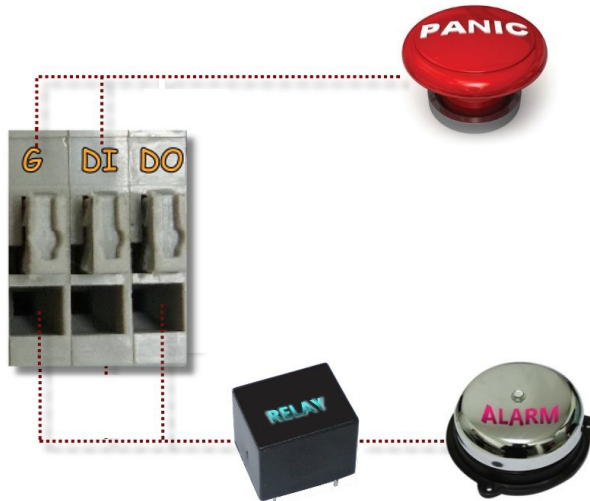


- a. Internet Access: ADSL or Cable Modem
- b. IP address: one real IP or one dynamic IP
- c. IP Camera and PC connect to the internet
- d. Device needed: IP sharing
- e. Use virtual IP, set up port forwarding in IP sharing.

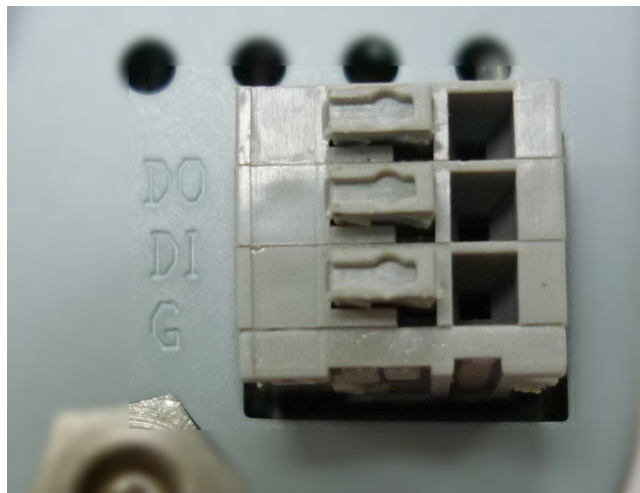
VII. I/O Configuration

1. I/O Connection

- a. Please connect the GND & DO pin to the external relay (buzzer) device.
- b. Please connect the GND & DI pin to the external trigger device.



c. I/O PIN definition



- GND (Ground): Initial state is LOW
- DO (Digital Output): DC 5V
- DI (Digital Input): Max. 50mA, DC 5V

2. I/O Setup

- a. Click I/O Setting from the system setup page via IE, and check "Out1" to enable I/O signal.

I/O Setting

Input Setting

Input 1 Sensor: N.O

Input 1 Action: ☒ E-mail ☒ FTP ☐ Out1 ☐ Save to SD card ☒ Samba

Subject: GPIO In Detected!

Interval: 10 sec

☐ Based on the schedule

Output Setting

Mode Setting: ☒ OnOff Switch ☐ Time Switch

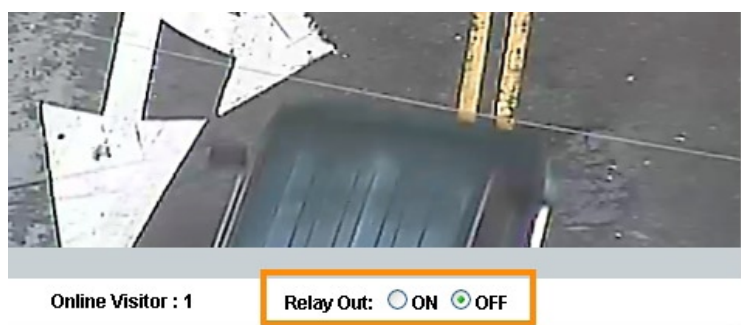
Interval: 10 sec

b. Output Test

After the external input and output hardware is installed, you can use the "Relay Out" bottom on the live video page to test if DO / Relay Out works.

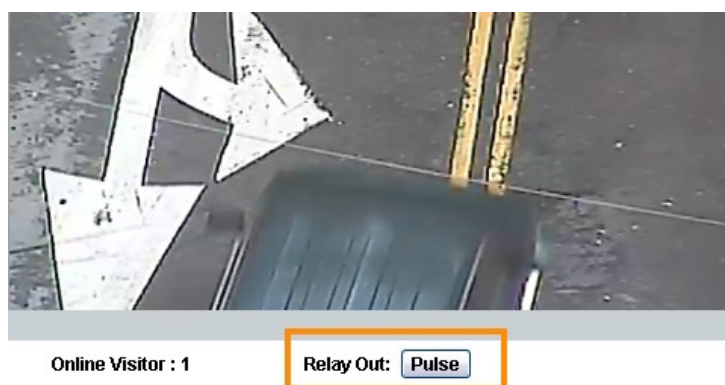
(i) OnOff Switch mode:

Click "ON", the camera will trigger the external output device for 10 seconds. For example, your alarm buzzer will continuously ring for 10 seconds. After 10 seconds the buzzer stops ringing, or you can manually break off the output signal by clicking "OFF".



(ii) Time Switch mode:

Click "Pulse", the camera will trigger the external output device for several seconds. The duration length is according to the "interval" setting in Output Setting.



VIII. Factory Default

If you forget your password, please follow the steps to revert back to default value.

- Remove the power adapter and the ethernet cable. Press and hold the button on the back of IP CAMERA.



- Connect the power to the camera. Don't release the button during the system booting.
- It takes around 30 seconds to boot the camera.
- Release the button after the camera finishes booting.
- Plug in the ethernet cable. Re-login the camera using the default IP (<http://192.168.1.200>), and user name (admin), password (admin).

IX. Package Contents

- IP Camera Network Camera
- Adaptor: AC100-240V DC12V/0.5A
- CD (Including User manual and IP installation tool)

X. Micro SD Card Compatibility

The following is the Micro SD Card recommended:

Transcend	SDHC	class4	16GB
	SDHC	class4	32GB
	SD	class4	16GB
	SD	class4	32GB
	SDHC	class6	4GB
	SDHC	class6	8GB
	SDHC	class6	16GB
	SD	class6	4GB
	SD	class6	8GB
	SD	class6	16GB
	SDHC	class10	4GB
	SDHC	class10	8GB
	SDHC	class10	16GB
SanDisk	SDHC	class4	4GB
	SDHC	class4	8GB
	SDHC	class4	16GB
	SDHC	class4	32GB